Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

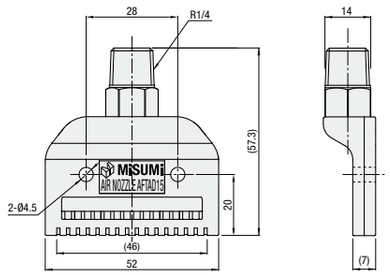
Flat Air Nozzles

Air-Amplified Standard Type

Air blow videos are now on the web! ▶ MISUMI Nozzles Videos Search http://jp.misumi-ec.com/

RoHS

Type	Material	Max. Operating Pressure	Thread Breakdown Torque	Heat Resistance Temp.
AFTAD	PPS Resin	0.7MPa	10N・m	200°C



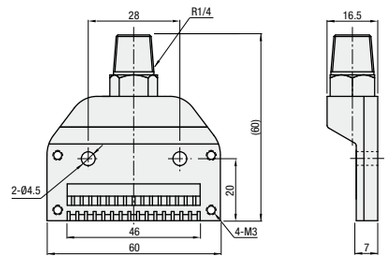
■Features
Air volume and speed out of the orifices are increased by taking surrounding air.
High colliding force with less air enables energy saving and air consumption reduction.
PPS Resin is used to improved oil and heat resistance.
Grooves are provided at the tip of the nozzle to protect the orifice.
To prevent damage
・Avoid excessive tightening of screws.
・Avoid shocks to the screws.

Part Number Type	Part Number No.	Orifice	Air Flow Rate NL/Min (for 0.3MPa)	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~39	40~99	100~200
AFTAD	15	16-Ø1	270	15				

Part Number AFTAD15

For orders larger than indicated quantity, please check with WOS.

Type	Material	Max. Operating Pressure	Heat Resistance Temp.
AFTADA	A5052P	0.4MPa	200°C



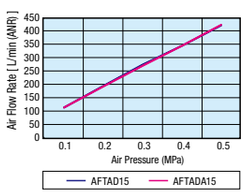
■Features
Air volume and speed out of the orifices are increased by taking surrounding air.
High colliding force with less air enables energy saving and air consumption reduction.
Grooves are provided at the tip of the nozzle to protect the orifice.
Do not disassemble the main body.
For AFTADA, MISUMI logo, Product Name or Part Number is not engraved.

Part Number Type	Part Number No.	Orifice	Air Flow Rate NL/min (for 0.3MPa)	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~9	10~19	20~30
AFTADA	15	16-Ø1	270	60				

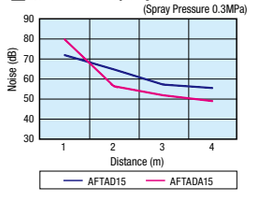
Part Number AFTADA15

For orders larger than indicated quantity, please check with WOS.

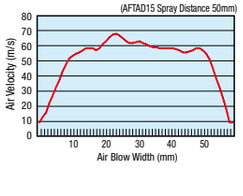
■Air Flow Rate Property Table



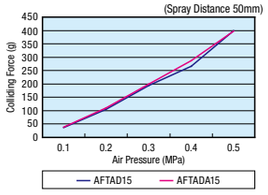
■Quietness Property Table



■Velocity Characteristic Table

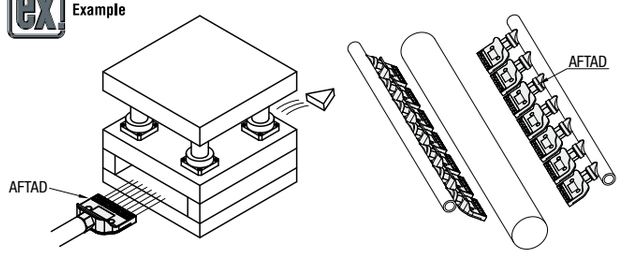


■Air Colliding Force Property Table



Listed Flow Rate is Supplied Flow Rate, not Discharged Flow Rate.
Values on the graph are for reference, not guaranteed.

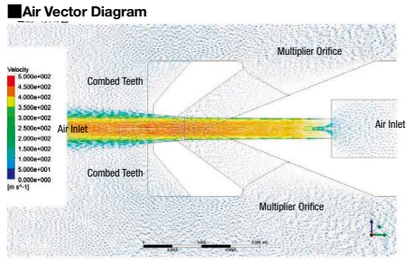
Example



(Transfer of press stamped material)
・Suitable for conveying heavy load due to increased colliding force.

(Drying of Camshaft)
Since its high air efficiency, air volume savings is possible when blowing long objects side by side.

■Air Vector Diagram



・Air flow volume and velocity are amplified by the air taken in from the combed teeth of the nozzle tip and multiplier orifice.
・According to our experimental measured value, Flow Velocity is approximately 1.5 times or more of Standard Type (AFTSP15).

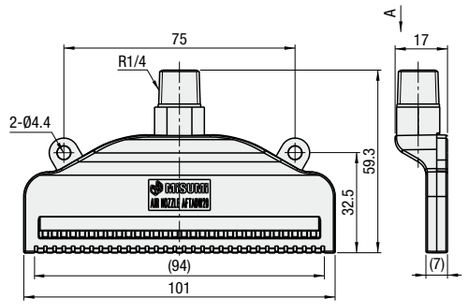
Flat Air Nozzles

Air-Amplify Wide Type / Air-Amplify Compact Type

■Air-Amplify Wide Type

RoHS

Type	Material	Max. Operating Pressure	Heat Resistance Temp.
AFTADW	PPS Resin	0.7MPa	200°C



Arrow View A

■Features
Blow Port width approx. two times as wide as Standard Type (AFTAD).
Air volume and speed out of the orifices are increased by taking surrounding air.
High colliding force with less air enables energy saving and air consumption reduction.
PPS Resin is used to improved oil and heat resistance.
Grooves are provided at the tip of the nozzle to protect the orifice.
Hex socket type connecting port allows easy replacement even when the damage to the thread occurs.
To prevent damage
・Avoid excessive tightening of screws.
・Avoid shocks to the screws.

Part Number Type	Part Number No.	Orifice	Air Flow Rate NL/min (for 0.3MPa)	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~39	40~99	100~200
AFTADW	20	32-Ø1	410	28				

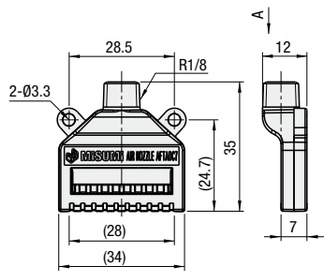
Part Number AFTADW20

For orders larger than indicated quantity, please check with WOS.

■Air-Amplify Compact Type

RoHS

Type	Material	Max. Operating Pressure	Heat Resistance Temp.
AFTADC	PPS Resin	0.7MPa	200°C



Arrow View A

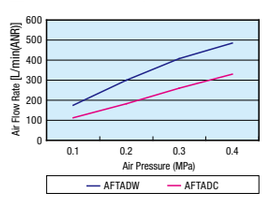
■Features
More compact than Standard Type (AFTAD). (Width: Approx. 35%, Overall Length: Approx. 40% more compact)
Air volume and speed out of the orifices are increased by taking surrounding air.
High colliding force with less air enables energy saving and air consumption reduction.
PPS Resin is used to improved oil and heat resistance.
Grooves are provided at the tip of the nozzle to protect the orifice.
Hex socket type connecting port allows easy replacement even when the damage to the thread occurs.
To prevent damage
・Avoid excessive tightening of screws.
・Avoid shocks to the screws.

Part Number Type	Part Number No.	Orifice	Air Flow Rate NL/min (for 0.3MPa)	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~39	40~99	100~200
AFTADC	7	10-Ø1	260	7				

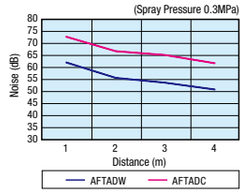
Part Number AFTADC7

For orders larger than indicated quantity, please check with WOS.

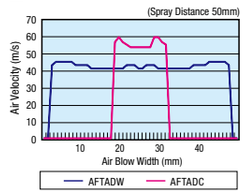
■Air Flow Rate Property Table



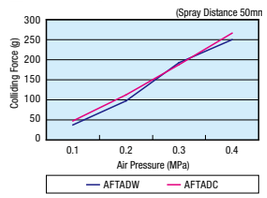
■Quietness Property Table



■Velocity Characteristic Table



■Air Colliding Force Property Table



Listed Flow Rate is Supplied Flow Rate, not Discharged Flow Rate.
Values on the graph are for reference, not guaranteed.

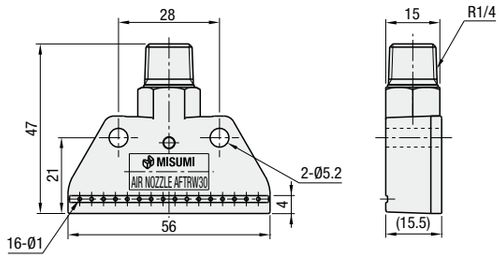
Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

90° Air Nozzle
Standard / Compact

Air blow videos are now on the web! MISUMI Nozzles Videos Search http://jp.misumi-ec.com/

■Standard

Type	Material	Max. Operating Pressure	Breakdown Torque	Heat Resistance Temp.
AFTRW	ABS Plastic	0.7MPa	7N・m	70°C



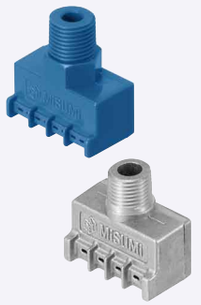
■Features
Suitable for limited space. Easy to mount since air projection angle is vertical to the thread face.
To prevent damage
・Avoid excessive tightening of screw.
・Avoid shocks to the screws.

Part Number Type	No.	Orifice	Air Flow Rate N L/min (for 0.3MPa)	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~39	40~99	100~200
AFTRW	30	16-Ø1	210	15				

For orders larger than indicated quantity, please check with WOS.

Part Number AFTRW30

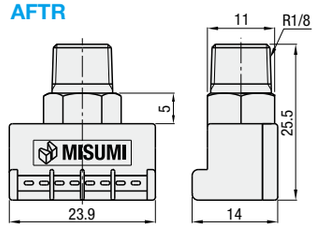
■Compact



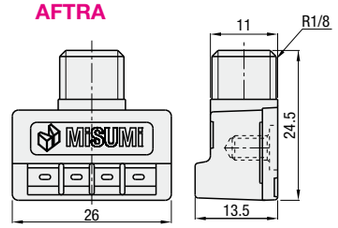
Type	Material	Surface Treatment	Max. Operating Pressure	Heat Resistance Temp.
AFTR	ABS Plastic	-	0.7MPa	70°C
AFTRA	ADC12	Electroless Nickel Plating	0.7MPa	200°C

■Features
Air Nozzles are more compact than Standard Type.
(Width: Approx. 60%, Overall Length: Approx. 45% more compact)
To prevent damage
・Avoid excessive tightening of screws.
・Avoid shocks to the screws.

AFTR



AFTRA

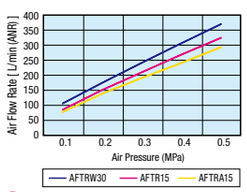


Part Number Type	No.	Orifice	Air Flow Rate NL/min (for 0.3MPa)	Weight (g)	AFTR Unit Price 1 ~ 4 pc(s).	AFTR Volume Discount Rate 5~39	40~99	100~200	AFTRA Unit Price 1 ~ 4 pc(s).	AFTRA Volume Discount Rate 5~9	10~19	20~30
AFTR	15	8-Ø0.6x1.5	210	4					-	-	-	-
AFTRA		4-Ø0.8x1.8	190	10	-	-	-	-				

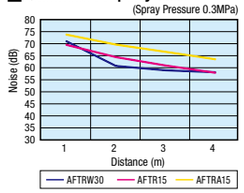
For orders larger than indicated quantity, please check with WOS.

Part Number AFTR15

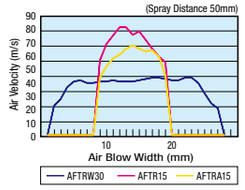
■Air Flow Rate Property Table



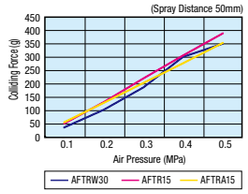
■Quietness Property Table



■Velocity Property Table

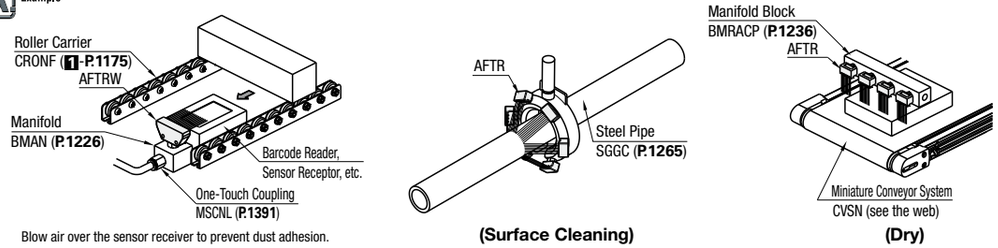


■Air Colliding Force Property Table



Values on the graph are for reference, not guaranteed.

Example

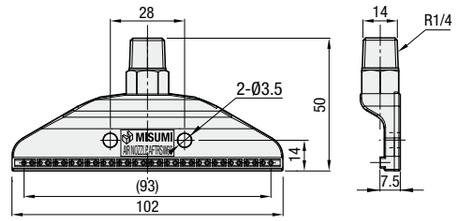


90° Air Nozzle
Wide / Vertica Blow

Air blow videos are now on the web! MISUMI Nozzles Videos Search http://jp.misumi-ec.com/

■Wide Type

Type	Material	Max. Operating Pressure	Heat Resistance Temp.
AFTRSW	ABS Plastic	0.7MPa	70°C



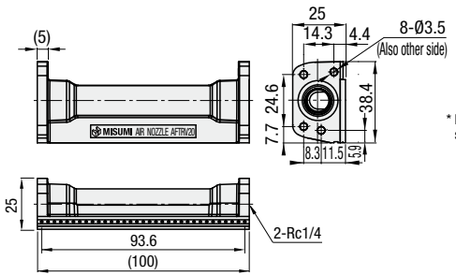
■Features
Blow Port width approx. two times as wide as Standard Type (AFTRW), allows for parts reduction. Ribs are provided to protect the orifice.
To prevent damage
・Avoid excessive tightening of screws.
・Avoid shocks to the screws.

Part Number Type	No.	Orifice	Air Flow Rate NL/Min (for 0.3MPa)	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~39	40~99	100~200
AFTRSW	60	32-Ø1	290	20				

For orders larger than indicated quantity, please check with WOS.

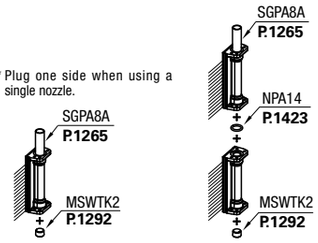
■Vertica Blow Type

Type	Material	Max. Operating Pressure	Heat Resistance Temp.
AFTRV	ABS Plastic	0.7MPa	70°C



■Features
Connection mechanism enables spray width to be adjusted according to the workpiece.
*Connect nozzles by tightening screws with O-Rings (JIS Nominal Number P14) in between.

* Plug one side when using a single nozzle.



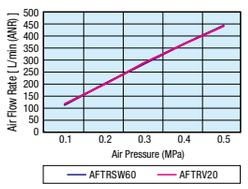
When connecting, use in combination with nozzle supports.

Part Number Type	No.	Orifice	Air Flow Rate NL/Min (for 0.3MPa)	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~39	40~99	100~200
AFTRV	20	33-Ø1	290	25				

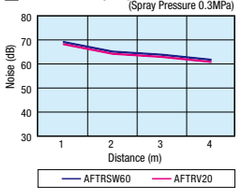
For orders larger than indicated quantity, please check with WOS.

Ordering Example Part Number AFTRSW60 AFTRV20

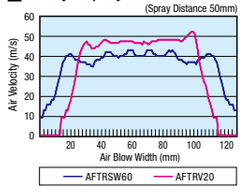
■Air Flow Rate Property Table



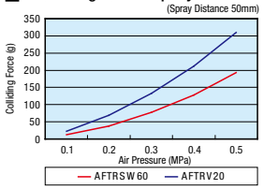
■Quietness Property Table



■Velocity Property Table

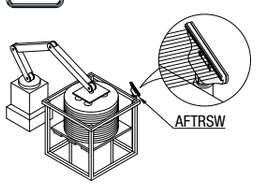


■Air Colliding Force Property Table

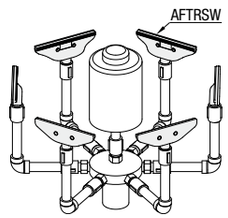


Values on the graph are for reference, not guaranteed.

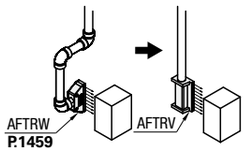
Example



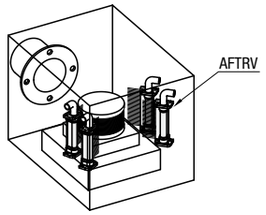
(Separating thin sheet metal plates coated with machining oil)
・Prevents duplicative conveyance of the subject workpiece.



(Clearning of Workpiece Exterior)
・Suitable for surface cleaning of cylindrical workpiece.



(Plumbing Reduction)
・Easy handling of plumbing.



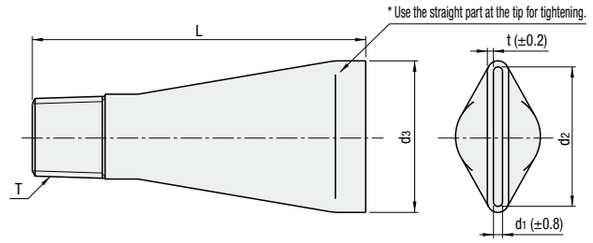
(Drying in Air Blow Room)
・Effective for air blow in limited spaces as nozzle and plumbing are arranged in the same direction.

Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

High Flow Rate Blower Nozzles

Type	Material	Heat Resistance Temp.
AFTHF	SUS304	300°C

Features:
Structure capable of effective air blow.
Blower-based air supply enables power and air consumption saving.
This Air Nozzle is good for long time continuous air spray.



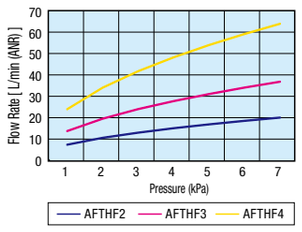
RoHS

The tip is slightly arc shaped due to flat forming after pipe expanding.

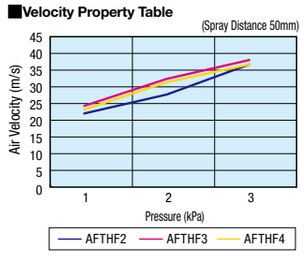
Part Number Type	No.	L	d1	d2	d3	t	T	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~9	10~19	20~30
AFTHF	2	70	4	21	25	2.2	R1/4	38				
	3	70	4	25	29	2.3	R3/8	52				
	4	80	4	31	35	2.5	R1/2	82				

Ordering Example — Part Number: AFTHF2

Air Flow Rate Property Table

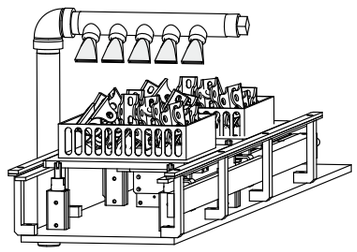


Velocity Property Table

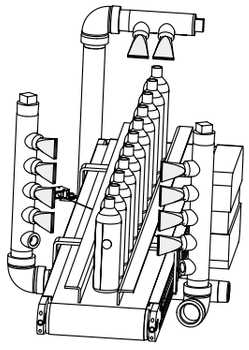


Values on the graph are for reference, not guaranteed.

Example



(Drying of Workpiece)



(Drying of Workpiece)

Flat Air Nozzles / High Pressure Blowers

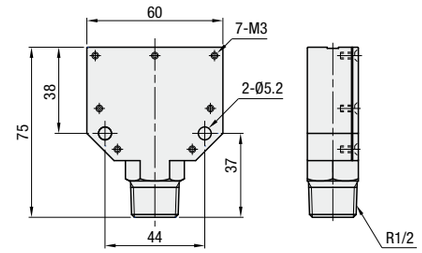
For Blowers

For Blower

RoHS

Type	Material	Max. Operating Pressure	Heat Resistance Temp.
AFTBA	A5052P	0.7MPa	200°C

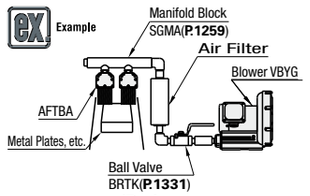
Features
Nozzle suitable for high flow rate air blow based on blowers.
Blower-based air supply enables power and air consumption saving.
This Air Nozzle is good for long time consumption saving air spray.



Part Number Type	No.	Orifice	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~10
AFTBA	80	8-Ø4	105		

Ordering Example — Part Number: AFTBA80

Example

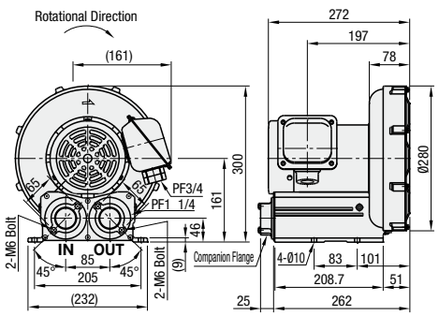


(Dry)

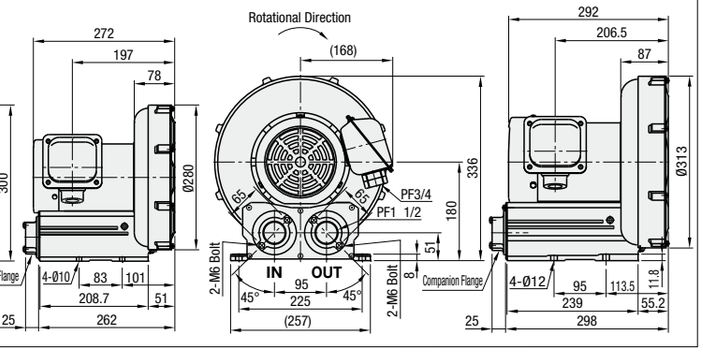
High Pressure Blowers

RoHS

VBYE



VBYG

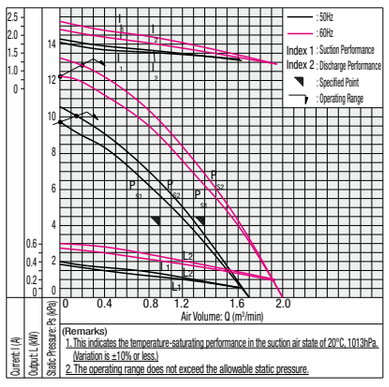


Part Number Type	Number of Phases	Power Supply Voltage (V)	Frequency (Hz)	Suction Properties Rated Value Air Volume (m3/min)	Suction Properties Rated Value Static Pressure (kPa)	Suction Properties Maximum Properties Static Pressure (kPa)	Suction Properties Maximum Properties Output (kW)	Suction Properties Maximum Properties Current (A)	Discharge Properties Maximum Properties Static Pressure (kPa)	Discharge Properties Maximum Properties Output (kW)	Discharge Properties Maximum Properties Current (A)	Max. Air Volume (m³/min)	Noise dB(A)	Striking Current (A)	Mass (kg)	Unit Price 1 unit
VBYE	3-phase	200	50	0.9	4.4	9.7	0.35	1.8	10.2	0.38	1.9	1.7	58	17.4(50Hz)	17.5	
			60	1.3	4.4	12.3	0.53	2.2	12.7	0.56	2.3	2	62	16.7(60Hz)		
VBYG	3-phase	200	50	1.2	6.5	11.5	0.63	2.9	12.3	0.67	3.1	2.6	63	22(50Hz)	21.5	
			60	2	5.9	13.3	0.88	3.6	13.5	0.9	3.7	3.1	66	20(60Hz)		

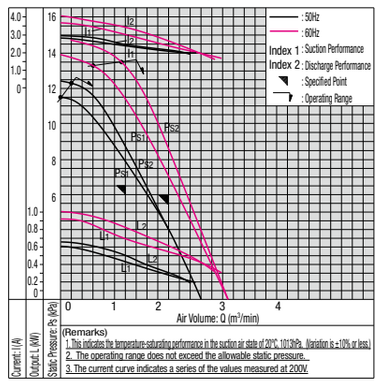
Part Number: VBYE

Operating Range

VBYE



VBYG



Specifications
- Ambient Temperature and Suction Air Temperature: -20 ~ +40°C
- Relative Humidity: 90% or less
- Limit suction operation to air. Do not suction fluid and corrosive / explosive gas.

Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

Air Nozzles - Economy Type / Air Nozzles - De Laval Type

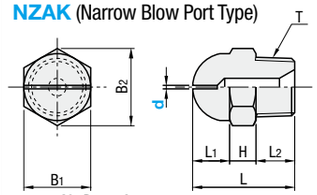
Spray Nozzles - Circular Spray Pattern

Standard / Air-Amplify Type

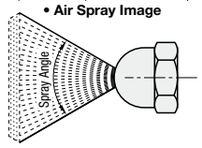
■Air Nozzles - Economy Type

RoHS

NZAK (Narrow Blow Port Type)

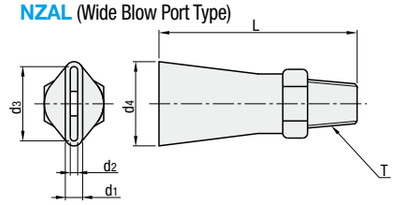


• Air Spray Image

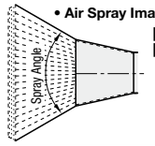


■**Features:** Gas spreads fan-like in line to the slit.
■**Applications:** Steam Humidification, Drying, Air Blow, etc.

NZAL (Wide Blow Port Type)



• Air Spray Image



■**Features:** Air sprayed at wide angle.
■**Applications:** Dust Proof, Air Blow, etc.

Ⓜ Material: SUS304

Part Number Type	No.	d Slot Width	T	L	L1	L2	H	B1	B2	Mass (g)	Unit Price 1 ~ 4 pc(s).	Unit Price 5~20	Volume Discount Rate
NZAK	1	0.6 0.8 1.0	R1/8	22	8	8	6	12	13.8	12			
	2	1.2 1.6	R1/4	25	8.5	10	6.5	14	16	20			

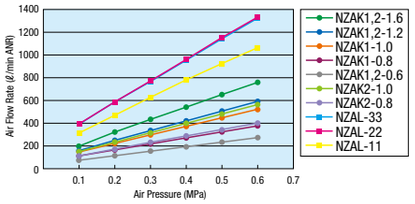
Part Number Type	No.	L	d1	d2	d3	d4	T	Mass (g)	Unit Price 1 ~ 4 pc(s).	Unit Price 5~20	Volume Discount Rate
NZAL	11	40	3.1	1.5	10	11.6	R1/8	15			
	22	40	3.5	1.5	15	17		20			
	33	45	3.5	1.5	18.5	20.5		30			

■Projection Angle

Pressure [MPa]	Projection Angle NZAK 1-0.6	1-0.8	1-1.0	1-1.2	1-1.6	2-0.6	2-0.8	2-1.0	2-1.2	2-1.6	NZAL 11	22	33
0.1	55°	60°	65°	65°	70°	60°	60°	65°	65°	70°	25°	50°	55°
0.2	60°	65°	75°	70°	70°	65°	70°	75°	70°	70°			
0.3	65°	70°	75°	75°	75°	70°	75°	80°	75°	75°			
0.4	70°	75°	80°	80°	80°	75°	80°	85°	80°	80°			
0.5	75°	80°	80°	80°	85°	80°	85°	85°	85°	85°			
0.6	80°	80°	85°	85°	85°	85°	85°	85°	85°	85°			

Listed values are for reference, not guaranteed.

■Air Flow Rate Property Table



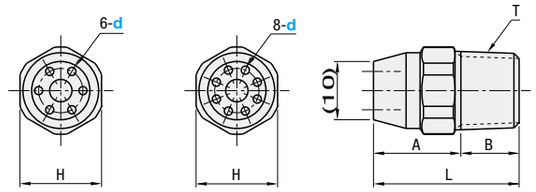
Values on the graph are theoretical values, not guaranteed.

■Standard

RoHS

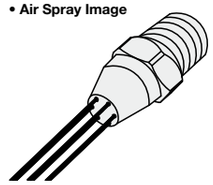
Type	Material	Max. Operating Pressure	Breakdown Torque	Heat Resistance Temp.
ARDP	Polypropylene (PP)	0.7MPa	15N·m	70°C
ARDA	A5052P	1.0MPa	-	200°C
ARDS	SUS303			

N (Number of Holes) = 6 **N (Number of Holes) = 8**



■**Features:** Strong straight air is sprayed through holes on the end.
■**Applications:** For removal of oil, water drops and chips, cooling / drying and air blow to narrow spaces, etc.

• Air Spray Image



Part Number Type	d	N (Number of Holes)	Air Flow Rate L/min (for 0.3MPa)	T	L	A	B	H	Mass (g) ARDP	ARDA	ARDS
ARDP ARDA ARDS	1.0	6	190	R1/4	25	15	10	14	2	6	15
		8	250								
	1.4	6	350							10	28
		8	480								

d	N (Number of Holes)	ARDP Unit Price 1 ~ 4 pc(s).	ARDP Volume Discount Rate 5~20	ARDA Unit Price 1 ~ 4 pc(s).	ARDA Volume Discount Rate 5~20	ARDS Unit Price 1 ~ 4 pc(s).	ARDS Volume Discount Rate 5~20
1.0	6						
	8						
1.4	6						
	8						

For orders larger than indicated quantity, please check with WOS.

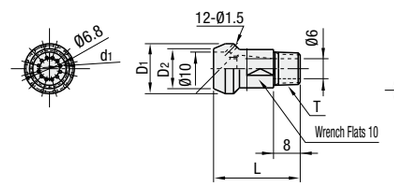
■Air-Amplified Type

RoHS

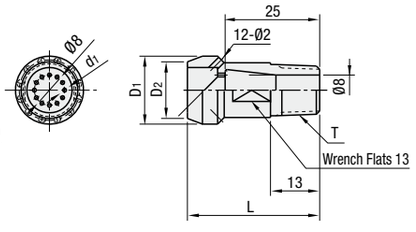
Type	Material	Max. Operating Pressure	Heat Resistance Temp.
ARDADA	A5052	0.7MPa	200°C

■**Features**
Air volume and speed out of the orifices are increased by taking surrounding air.
High colliding force with less air enables energy saving and air consumption reduction.

No.1



No.2



Part Number Type	No.	T	Orifice d1	L	D1	D2	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~20
ARDADA	1	R1/8	0.8	26	15	12	5		
	2	R1/4	1	35	18	15	9		

For orders larger than indicated quantity, please check with WOS.

Ordering Example: Part Number **ARDA1.0 ARDADA1** - N (Number of Holes) **6**

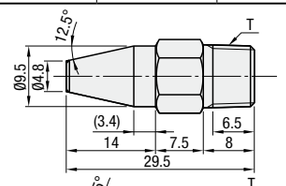
■Air Nozzles - De Laval Type

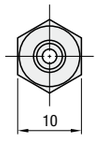
RoHS

Type	Material	Max. Operating Pressure	Heat Resistance Temp.
ALVA	A5052	0.7MPa	200°C
ALVS	SUS303		

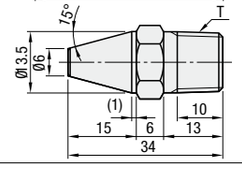
■**Features**
Special internal structure enables the air blow at sonic speed, which has powerful colliding force.

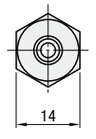
ALVA
No.=1



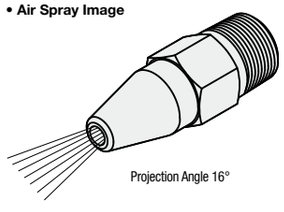


ALVA, ALVS
No.=2





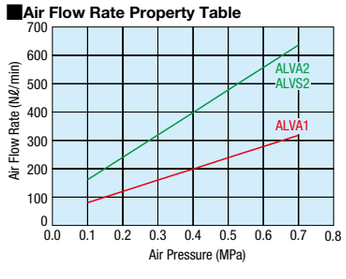
• Air Spray Image



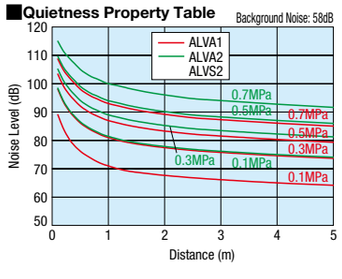
Part Number Type	No.	T	Orifice	Weight (g)	ALVA Unit Price 1 ~ 4 pc(s).	ALVA Volume Discount Rate 5~20	ALVS Unit Price 1 ~ 4 pc(s).	ALVS Volume Discount Rate 5~20
ALVA	1	R1/8	Ø2.7	8			-	-
ALVS	2	R1/4	Ø3.8	11				

Part Number - d
NZAK2 - 1.0
NZAL11
ALVA1

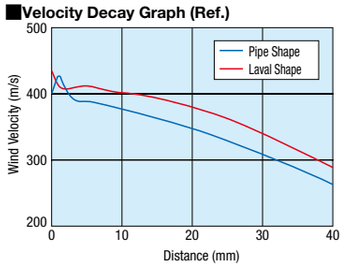
■Air Flow Rate Property Table



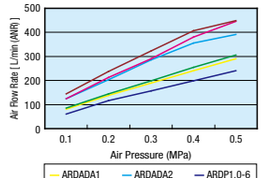
■Quietness Property Table



■Velocity Decay Graph (Ref.)

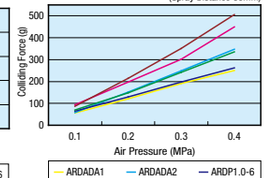


■Air Flow Rate Property Table



■Air Colliding Force Property Table

(Spray Distance 50mm)



Values on the graph are for reference, not guaranteed.

Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

Nozzles with Swaged Sleeve Couplings / Point Nozzles

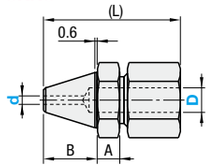
■Nozzles with Swaged Sleeve Couplings

RoHS

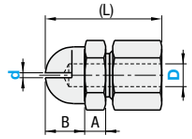
Type	Material	Heat Resistance Temp.
SKNS SKNF	Ferrule: SUS304 Others: SUS304	200°C

■Features
Swaged Sleeve Type can be directly connected to the pipes.
Easy positioning when pinpoint air blow is desired.

SKNS

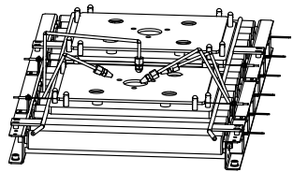


SKNF



Part Number Type	Applicable Pipe O.D. D	Orifice d Selection	(L)	B	A	Width Across Main Body	Width Across Nut	Weight (g)	Unit Price 1 ~ 4 pc(s).	Unit Price 5~20
SKNS	4	1.0 1.5 2.0	25.3	9	4	14	12	15		
	6	1.5 2.0 3.0	30.6	12	5.5	14	13	20		
	8	2.0 3.0 5.0	37	13	8	19	17	38		
SKNF	4	0.8 1.0 1.2	24.2	8	4	13	12	15		
	6		28.4	10	5.5	14	13	20		
	8		38	14	8	19	17	40		

Example

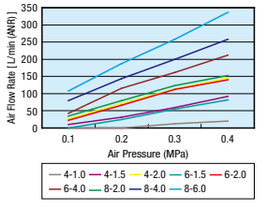


(Cleaning of Workpiece)

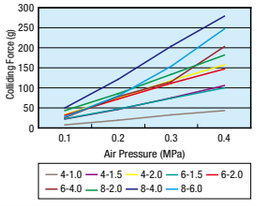
Ordering Example

Part Number	-	d
SKNS4	-	1.5
SKNF6	-	1

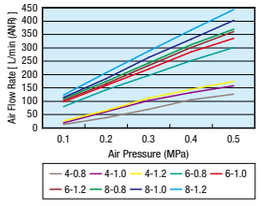
■SKNS Air Flow Rate Property Table



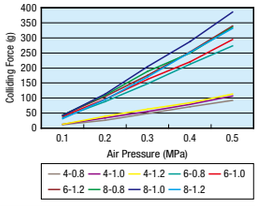
■SKNS Air Colliding Force Property Table



■SKNF Air Flow Rate Property Table



■SKNF Air Colliding Force Property Table

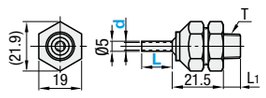


■Point Nozzle

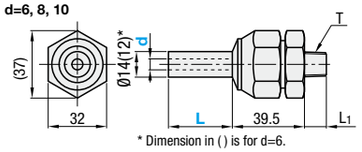
RoHS

PNZRF

d=3, 4

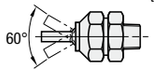


d=6, 8, 10



* Dimension in ( ) is for d=6.

• **Angle Adjustable Range** Tighten the hex nut and fix the nozzle at a desired angle.



M Material: SUS304

Part Number Type	No.	d Selection	L Selection	T	L1	Unit Price 1 ~ 20 pc(s). L10, 15	L30	L50	L75	L100
PNZRF	5	3 4	10 15 30 50	M5	8				-	-
	1	3 4	10 15 30 50 75 100	R1/8	10					
	2	3 4 6 8 10		R1/4	12				-	-

For orders larger than indicated quantity, please request a quotation.

Ordering Example

Part Number	-	d	-	L
PNZRF2	-	3	-	10

Point Nozzles

Compact / Reverse Flow Prevention

■Compact

(Screw-In Type)

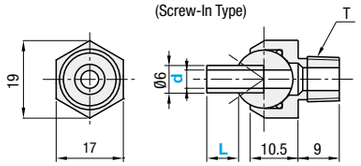
(Fit-In Type)

RoHS

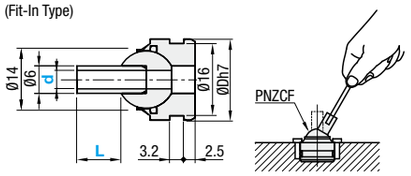
Type	Material Main Body	Material Pipe	Material Ball	Surface Treatment S Main Body
PNZCS (Screw-In Type) PNZCF (Fit-In Type)	S45C	SUS304	SUS303	Black Oxide

■Features
Selectable from Screw-In Type and Fit-In Type depending on the application. For Fit-In Type, fix the nozzle with screws after insertion.

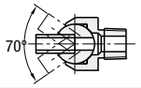
(Screw-In Type)



(Fit-In Type)



Angle Adjustable Range: 70°



For Fit-In Type, fix the nozzle shoulder with screws.
When using Fit-In Type, install O-Ring (JIS Nominal Number P16).
Make adjustment by inserting a shaft or a hex wrench into the pipe I.D.

Part Number Type	No.	d I.D.	L Selection	T	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~9	10~19	20~50
PNZCS	1	3	10 30 50	R1/8				
		4						
	2	3	10 30 50	R1/4				
		4						

For orders larger than indicated quantity, please check with WOS.

Part Number Type	No.	d I.D.	L Selection	D	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~9	10~29	30~50
PNZCF	18	3	10 30 50	18				
		4	10 30 50					

For orders larger than indicated quantity, please check with WOS.

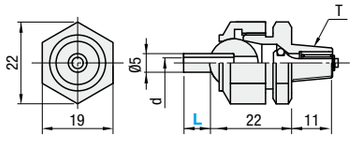
Ordering Example

Part Number	-	d	-	L
PNZCS1	-	3	-	10
PNZCF18	-	3	-	50

■Reverse Flow Prevention

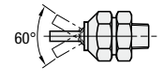
RoHS

Type	Material Pipe, Ball, Body, Washer	Material Spring	Material O-Ring	Material E-Ring
PNZCV	SUS303	SWP-A	Nitrile Rubber	Spring Steel



■Features
Point Nozzles with built-in Check Valve. Air can be stored in the pipe. High reactive air blow is possible.

Angle Adjustable Range: 60°
Tighten the hex nut and fix the nozzle at a desired angle.



Air can not be stored completely.
Do not disassemble the main body.

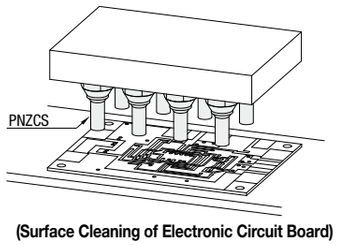
Part Number Type	No.	L Selection	Cracking Pressure (MPa)	d	T	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~9	10~29	30~50
PNZCV	1	10	0.05 0.1 0.2	3	R1/8				
		30							
		50							
	2	10			R1/4				
		30							
		50							

For orders larger than indicated quantity, please check with WOS.

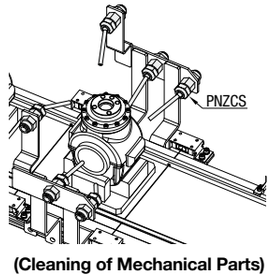
Ordering Example

Part Number	-	L	-	Cracking Pressure (MPa)
PNZCV1	-	30	-	0.1

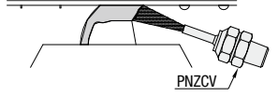
Example



(Surface Cleaning of Electronic Circuit Board)
・Possible to adjust the spray angle without using tools and can be easily used in congested spaces.

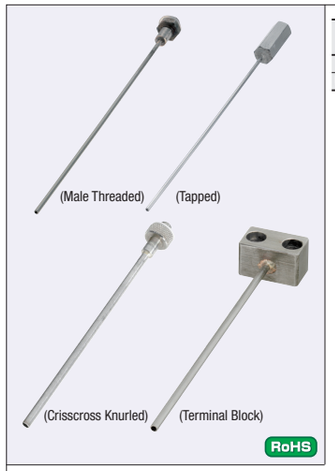


(Cleaning of Mechanical Parts)
・Angle adjustable and suitable for air blow for complex shapes of workpieces.



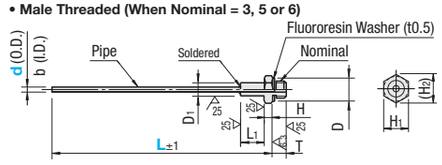
(N_2 spray for antioxidizing of solder)
・Can prevent reverse flow and thereby, avoids the outside air from being mixed into the blowing air.

Air Blow Nozzles

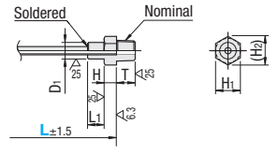


	Male Threaded		Tapped		Crisscross Knurled	Terminal Block	M Material	H Hardness
	Annealing	No Annealing	Annealing	No Annealing	Annealing	Annealing		
L Fixed	ABNZ	ABNZN	ABNZM	ABNZMN	ABNK	ABTA	Main Body, Pipe SUS304	Annealing HV200 or Less No Annealing HV250 ~ 380
L Configurable	ABNZL	ABNZNL	ABNZML	ABNZMNL	ABNX	ABTAL		

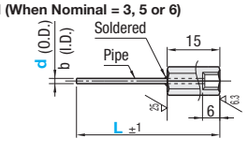
• Male Threaded (When Nominal = 3, 5 or 6)



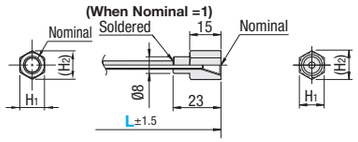
(When Nominal =0.5 or 1)



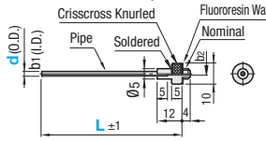
• Tapped (When Nominal = 3, 5 or 6)



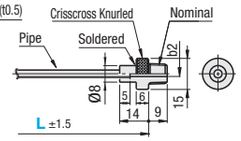
(When Nominal =1)



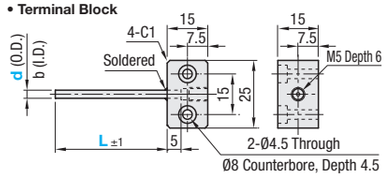
• Crisscross Knurled (When Nominal = 5)



(When Nominal =1)



• Terminal Block



■Threaded, Tapped

Part Number Type	Nominal	d	L Fixed	L 1mm Increment	b	Thread Size R / Rc (PT)	D1	L1	T	H	H1	(H2)	D	L Dimension Fixed Unit Price Male Threaded ABNZ	L Dimension Fixed Unit Price Male Threaded ABNZN	L Dimension Fixed Unit Price Tapped ABNZM	L Dimension Fixed Unit Price Tapped ABNZMN	L Dimension Configurable Unit Price Male Threaded ABNZL	L Dimension Configurable Unit Price Male Threaded ABNZNL	L Dimension Configurable Unit Price Tapped ABNZML	L Dimension Configurable Unit Price Tapped ABNZMNL
(L Fixed) ABNZ ABNZN ABNZM ABNZMN (L Configurable) ABNZL ABNZNL ABNZML ABNZMNL	3	1.0	100 150 (150 is for * marked types only.)	20~99 (Only * marked types 20~149)	0.5	M3	4	9.5	4	2.5	7	6.9	7		-		-		-		-
		1.5			0.8										-		-		-		-
		2.0			1.0										-		-		-		-
	5	1.0			0.5	M5		7				8.1									
		1.5			0.8																
		2.0			1.0																
		2.5			1.5																
		3.0			2.0																
	6	1.0			0.5	M6	5	9	5	3	8	9.2	9		-		-		-		-
		1.5			0.8										-		-		-		-
		2.0			1.0										-		-		-		-
		2.5			1.5										-		-		-		-
		3.0			2.0										-		-		-		-
	0.5	1.0		25~99	0.5	1/16	7	8	8	4	10	11.5	-		-	-	-		-	-	-
		1.5			0.8										-	-	-		-	-	-
		2.0			1.0										-	-	-		-	-	-
		2.5			1.5										-	-	-		-	-	-
		3.0			2.0										-	-	-		-	-	-
	1	4.0	100 200	30~199	3.0	1/8	8	9	6	12	13.8				-		-		-		-
		5.0			4.0										-		-		-		-
		6.0			5.0										-		-		-		-

■Crisscross Knurled

Part Number Type	Nominal	d	L Fixed	L 1mm Increment	b1	b2	Thread Size R (PT)	Unit Price L Fixed ABNK	Unit Price L Configurable ABNX
(L Fixed) ABNK (L Configurable) ABNX	5	1.0	100	20~99	0.5	2.0	M5		
		1.5			1.0	2.0			
		2.0			1.0	2.0			
		2.5			1.5	2.3			
		3.0			2.0	2.8			
	1	4.0			3.0	3.0	1/8		
		5.0			4.0	4.0			
		6.0			5.0	5.0			

■Terminal Block Type

Part Number Type	Nominal	d	L Fixed	L 1mm Increment	b	Unit Price L Fixed ABTA	Unit Price L Configurable ABTAL
(L Fixed) ABTA (L Configurable) ABTAL	5	1.0	100	20~99	0.5		
		1.5			0.8		
		2.0			1.0		
		2.5			1.5		
		3.0			2.0		

Ordering Example

Part Number	-	d	-	L
ABNZ5	-	1.5	-	100
ABNZNL5	-	2.0	-	65
ABNZL5	-	1.0	-	149

- The annealed pipe of d=1.0 ~ 3.0 can be manually bent (not applicable when d=4.0 or more). Be careful to bend referring to rough standard of minimum bending radius; O.D.x3. Annealed pipe is available for Straight Type.
- An industrial cutter can cut the pipe, rolling it.
- Main body may be discolored due to heat by brazing.

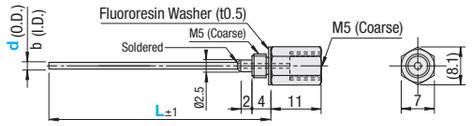
Alterations

Part Number - d - L - (CC)
ABNX5 - d1.0 - L50 - CC45

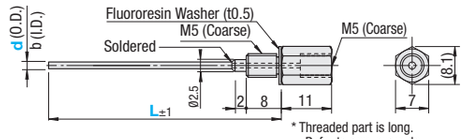
Alterations	Tip Cut 45°
Code	CC45
Spec.	Cuts the tip of nozzle at 45°. Applicable to wide-range air blow. Ordering Code CC45 Applicable to Crisscross Knurled ABNX only.

	Threaded and Tapped	Height Adjusting Threaded, Tapped	Strut Clamp Mounting	2-Core Threaded	Barbed Coupler	Hose Nipple	M Material	H Hardness
L Fixed	ABNZH	ABNML	ABNZS	ABNKH	ABNZT	ABNZP	Main Body, Pipe SUS304	HV200 or Less
L Configurable	ABNZHL	ABNMLL	ABNZSL	ABNXH	ABNZTL	ABNZPL		

• Threaded, Tapped ABNZH (L Fixed) ABNZHL (L Configurable)



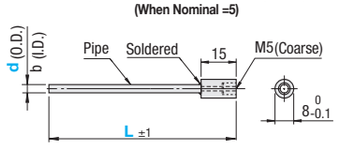
• Height Adjusting Threaded, Tapped ABNML (L Fixed) ABNMLL (L Configurable)



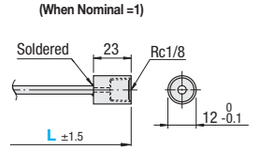
* Threaded part is long. Refer to app. example.

• Strut Clamp Mounting Type ABNZS (L Fixed) ABNZSL (L Configurable)

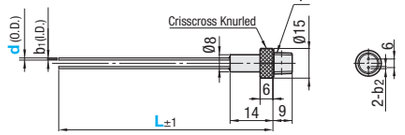
(When Nominal =5)



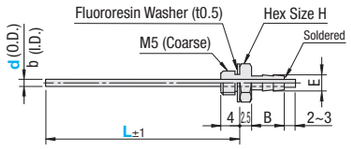
(When Nominal =1)



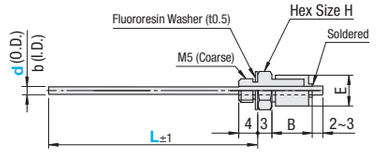
• 2-Core Threaded Type ABNKH (L Fixed) ABNXH (L Configurable)



• Barbed Coupler Type ABNZT (L Fixed) ABNZTL (L Configurable)



• Hose Nipple Type ABNZP (L Fixed) ABNZPL (L Configurable)



■Threaded and Tapped ■Height Adjusting Threaded, Tapped ■Strut Clamp Mounting

Part Number Type	Nominal	d	L Fixed	L 1mm Increment	b	L Dimension Fixed Unit Price ABNZH, ABNML	L Dimension Fixed Unit Price ABNZS	L Dimension Configurable Unit Price ABNZHL, ABNMLL	L Dimension Configurable Unit Price ABNZSL
(L Fixed) ABNZH ABNML ABNZS (L Configurable) ABNZHL ABNMLL ABNZSL	5	1.0	100 150 (150 is for ABNZH only.)	20 ~ 99 (20 ~ 149 for ABNZHL only.)	0.5				
		1.5			0.8				
		2.0			1.0	-		-	
		2.5			1.5	-		-	
		3.0			2.0	-		-	
	1	4.0	100 200	30~199	3.0	-		-	
		5.0			4.0	-		-	
		6.0			5.0	-		-	

■2-Core Threaded

Part Number Type	Nominal	Nozzle Quantity	d	L Fixed	L 1mm Increment	T R (PT)	b1	b2	Unit Price L Fixed ABNKH	Unit Price L Configurable ABNXH
(L Fixed) ABNKH (L Configurable) ABNXH	1	2	1.0	100	20~99	1/8	0.5	1.0		
			1.5				1.0	1.5		
			2.0				1.0	2.0		

- The pipe of d=1.0 ~ 3.0 can be manually bent (not applicable when d=4.0 or more). Be careful to bend referring to rough standard of minimum bending radius; O.D.x3.
- An industrial cutter can cut the pipe, rolling it.
- Main body may be discolored due to heat by brazing.
- When Barbed Coupler Type is used in combination with tube, use the same number. as O.D. of tube on **P.1385**.

■Barbed Coupler

Part Number Type	No.	d	L Fixed	L 1mm Increment	b	B	E	H	Unit Price L Fixed ABNZT	Unit Price L Configurable ABNZTL
(L Fixed) ABNZT (L Configurable) ABNZTL	4	1.0	100	20~99	0.5	6.9	3.4	7		
		1.5			0.8					
	6	2.0			1	7	4.8	7		
		2.5			1.5					

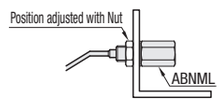
■Hose Nipple

Part Number Type	No.	d	L Fixed	L 1mm Increment	b	B	E	H	Unit Price L Fixed ABNZP	Unit Price L Configurable ABNZPL
(L Fixed) ABNZP (L Configurable) ABNZPL	4	1.7	100	20~99	0.9	8.5	6.5	7		
	6	2.5			1.5	9.5	8.5	8		

Ordering Example

Part Number	-	Nozzle Quantity	-	d	-	L
ABNZH5			-	1.5	-	100
ABNZSL1			-	5.0	-	172
ABNKH1	-	2	-	1.0	-	100

Ex Example



Air Blow Nozzles

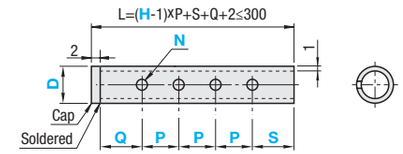
Pipe Nozzles / Copper Pipes for Air Blow / Nozzles with Attachment Plate

■Pipe Nozzles

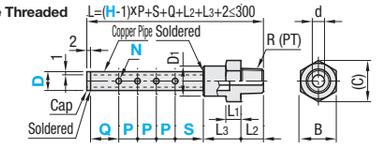
RoHS

Type			Material
Straight	Male Threaded	Tapped	
PNZC	PNMC	PNRC	Copper Pipe (C1220T)
PNZS	PNMS	PNRS	SUS304

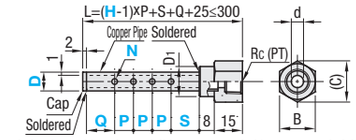
Straight



Male Threaded



Tapped



The body may be tarnished due to heat by brazing.
The above drawing is for 4 hole rows.

If threaded or tapped type is used, it is recommended to use a nozzle joint (**P.1475**) to blow at a desired angle.

■Straight

Part Number Type	D	H Number of Hole Rows	P 1mm Increment	N (Hole Dia.) Selection	S, Q 1mm Increment	PNZC Unit Price H1~9	PNZC Unit Price H10~20	PNZS Unit Price H1~9	PNZS Unit Price H10~20
PNZC PNZS	6	1~20	5~30	1.0 1.5 2.0	15~50				
	8								
	10								

When H=1, specification of P (Pitch) is not necessary.

■Threaded, Tapped

Part Number Type		D	H Number of Hole Rows	P 1mm Increment	N (Hole Dia.) Selection	S, Q 1mm Increment	R/ Rc(PT)	B	L1	L2	L3	D1	d	(C)	PNMC, PNRC Unit Price H1~9	PNMC, PNRC Unit Price H10~20	PNMS, PNRS Unit Price H1~9	PNMS, PNRS Unit Price H10~20
(Male Threaded)	(Tapped)	6	1~20	5~30	1.0 1.5 2.0	15~50	1/8	12	6	9	14	10	4	13.8				
PNMC	PNRC	8					1/4	16		12		14	6	18.4				
PNMS	PNRS	10						19	8		20	16	6.5	21.9				

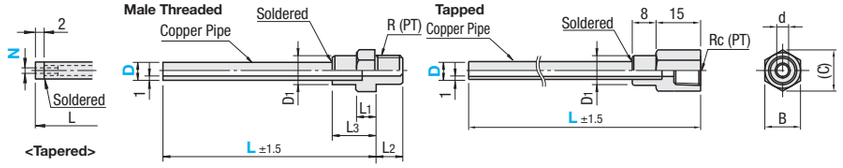
When H=1, specification of P (Pitch) is not necessary.

■Copper Pipes for Air Blow

RoHS

Type			Material		
Male Threaded		Tapped			
Straight	Tapered	Straight	Main Body	Pipe	Tapered
DKNZ	DKNZP	DKNZF	C3604	C1220T Annealed Copper Pipe (C1220T-0)	C3604
DKNZN	DKNZNP	DKNZFN			

The body may be tarnished due to heat by brazing.
The Annealing Copper Pipe is slightly bent.



■Straight

Part Number Type	D	L Selection	R/Rc (PT)	B	L1	L2	L3	D1	d	(C)	DKNZ, DKNZF Unit Price L100	L200	L300	L500	DKNZN, DKNZFN Unit Price L100	L200	L300	L500
DKNZ DKNZN DKNZF DKNZFN	6	100 200 300 500	1/8	12	6	9	14	10	4	13.8								
	8		1/4	16		12		14	6	18.4								
	10			19	8		20	16	6.5	21.9								

■Tapered

Part Number Type	D	L 1mm Increment	Diameter of Tapered Hole N Selection	R/Rc (PT)	B	L1	L2	L3	D1	d	(C)	DKNZP Unit Price L50~250	DKNZP Unit Price L251~500	DKNZNP Unit Price L50~250	DKNZNP Unit Price L251~500
DKNZP DKNZNP	6	50~500	1.0 1.5 2.0	1/8	12	6	9	14	10	4	13.8				
	8			1/4	16		12		14	6	18.4				
	10				19	8		20	16	6.5	21.9				

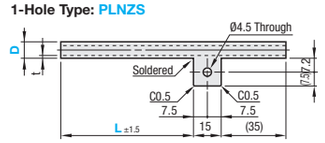
■Nozzles with Attachment Plate - 1-Hole Type, 2-Hole Type

RoHS

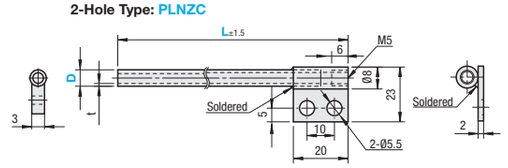
Type	Number of Holes	Material Pipe	Main Body	Plate
PLNZS	1-Hole	SUS304		
PLNZC	2-Hole	C1220T	C3604	SUS304

The body may be tarnished due to heat by brazing.

1-Hole Type: PLNZS



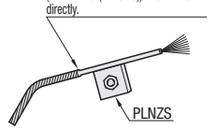
2-Hole Type: PLNZC



Part Number Type	D	L 1mm Increment	t	Unit Price L50~150	Unit Price L151~300
PLNZS	3	100~300	0.5		
PLNZC	4	50~300	0.5		
	6		1.0		

Example

Insert a tube with I.D.Ø2.5 inner dia. (ex. PUT4 on(**P.1385**)) into PLNZS directly.



Ordering Example

■Pipe Nozzles

Part Number	-	H (Number of Hole Rows)	-	P	-	N	-	S	-	Q
PNZC8	-	10	-	P10	-	N1.5	-	S15	-	Q15
PNMS10	-	1			-	N1.0	-	S20	-	Q20

■Copper Pipes for Air Blow

Part Number	-	L	-	N
DKNZFN8	-	300		
DKNZP8	-	200	-	N1.0

■Nozzles with Attachment Plate

Part Number	-	L
PLNZC6	-	150

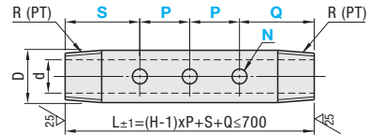
Steel Pipe Nozzles

Both Ends Threaded / Tapped, One End Threaded One End Tapped

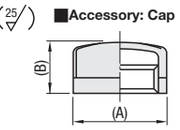
RoHS

■Both Ends Threaded

Type S, Q Fixed	Type S, Q Configurable	Material	Surface Treatment	Accessory
SGPPN	FSGPPN	SGPW	Zinc Plating	Cap (FCMB270, Hot Zinc Plating) 1 pc.
SUTPN	FSUTPN	SUS304TP	-	Cap (SUS304) 1 pc.

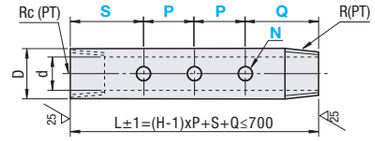


■Accessory: Cap



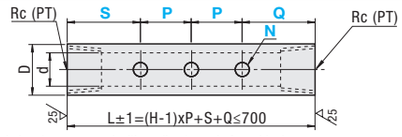
■One End Threaded One End Tapped

Type S, Q Fixed	Type S, Q Configurable	Material	Surface Treatment	Accessory
SGPPW	-	SGPW	Zinc Plating	Tapered Screw Plug (SCM435, Black Oxide) 1 pc.
SUTPW	FSUTPW	SUS304TP	-	Tapered Screw Plug (SUSXM7) 1 pc.



■Both Ends Tapped

Type S, Q Fixed	Type S, Q Configurable	Material	Surface Treatment	Accessory
SGPPF	FSGPFW	SGPW	Zinc Plating	Tapered Screw Plug (SCM435, Black Oxide) 1 pc.
SUTPF	FSUTFW	SUS304TP	-	Tapered Screw Plug (SUSXM7) 1 pc.



* Threaded ends are covered with sealing tapes before shipping.
There is no surface treatment on threads. * Marks may be left on the surface when tightening screws.
Excessive tightening may deform the female thread portion. Wrap with sealing tape for air tightness and after manual tightening, tighten it up further by giving one rotation or so.

■S, Q Fixed

Part Number Type	No.	H Number of Holes	P 5mm Increment	N (Hole Dia.) 0.5mm Increment	R (PT) Rc (PT)	S, Q	D	d SGPP□	d SUTP□	Cap Dim. of Both Ends Threaded Type (A)	Cap Dim. of Both Ends Threaded Type (B)
SGPPN SUTPN SGPPW SUTPW SGPPF SUTPF	1	2~94	5~30	1.5~3.0	1/8	15	10.5	-	5.7	18	14
	2				1/4	20	13.8	9.2	7.8	22	15
	3				3/8		17.3	12.7	10.9	27	18
	4				1/2	25	21.7	16.1	16.1	31	20

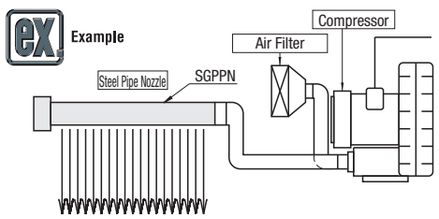
■S, Q Configurable

Part Number Type	No.	H Number of Holes	P 5mm Increment	N (Hole Dia.) 0.5mm Increment	S 1mm Increment	Q 1mm Increment	R (PT) Rc (PT)	D	d FSGP□	d FSUT□	Cap Dim. of Both Ends Threaded Type (A)	Cap Dim. of Both Ends Threaded Type (B)
FSGPPN FSUTPN FSUTPW FSGPFW FSUTFW	1	2~94	5~30	1.5~3.0	15~200	15~200	1/8	10.5	-	5.7	18	14
	2				20~200	20~200	1/4	13.8	9.2	7.8	22	15
	3						3/8	17.3	12.7	10.9	27	18
	4				25~200	25~200	1/2	21.7	16.1	16.1	31	20

Ordering Example

Part Number	-	H (Number of Holes)	-	P	-	N	-	S	-	Q
SUTPN3	-	30	-	P10	-	N1.5				
FSUTPW2	-	40	-	P5	-	N2.0	-	S50	-	Q80

Example



No.	SGPPN, SGPPF Unit Price H2~25	H26~50	H51~75	H76~94	SUTPN, SUTPF Unit Price H2~25	H26~50	H51~75	H76~94	SGPPW Unit Price H2~25	H26~50	H51~75	H76~94	SUTPW Unit Price H2~25	H26~50	H51~75	H76~94
1	-	-	-	-					-	-	-	-				
2																
3																
4																

No.	FSGPPN, FSGPFW Unit Price H2~25	H26~50	H51~75	H76~94	FSUTPN, FSUTFW Unit Price H2~25	H26~50	H51~75	H76~94	FSUTPW Unit Price H2~25	H26~50	H51~75	H76~94
1	-	-	-	-								
2												
3												
4												

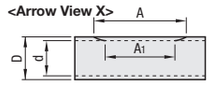
■Slit Steel Pipe Nozzles

RoHS

Type: Threaded and Tapped	Type: Both Ends Tapped	M Material	S Surface Treatment	A Accessory:
SLTR	SLTF	SGP	Zinc Plating	Tapered Screw Plug (SCM435, Black Oxide) 1 pc.
SLTRS	SLTFS	SUS304TP	-	Tapered Screw Plug (SUSXM7) 1 pc.

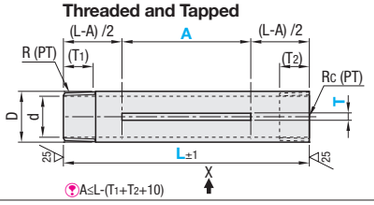
Accessory Tapered Screw Plug is seal-coated.

<Arrow View X>



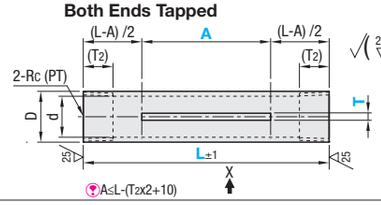
Maximum difference of A-A1 is approx. 6mm.

Threaded and Tapped



A≤L-(T1+T2+10)

Both Ends Tapped



A≤L-(T2x2+10)

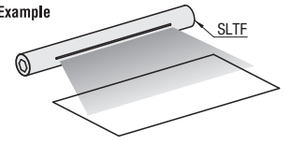
Part Number Type	No.	L 1mm Increment	A 1mm Increment	T 0.5mm Increment	R (PT) Rc (PT)	(T1)	(T2)	D	d Material: SGP	d Material: SUS304TP	SLTR, SLTF Unit Price Min. L ~ 250	L251~500	L501~700	SLTRS, SLTFS Unit Price Min. L ~ 250	L251~500	L501~700
(Threaded and Tapped) SLTR SLTRS	6A	90~700	50~500	0.5~2.0	1/8	10	11	10.5	-	5.7	-	-	-			
	8A	100~700			1/4	15	13	13.8	9.2	7.8						
	10A				3/8	17	16	17.3	12.7	10.9						
(Both Ends Tapped) SLTF SLTFS	15A				1/2	20	18	21.7	16.1	16.1						
	20A	110~700			3/4	23	20	27.2	21.6	21.4						
	25A				1	25	22	34	27.6	27.2						

There is no surface treatment on threaded part and slit machining and its peripheral part. * Marks may be left on the surface when tightening screws.
Excessive tightening may deform the female thread portion. Wrap with sealing tape for air tightness and after manual tightening, tighten it up further by giving one rotation or so.

Ordering Example

Part Number	-	L	-	A	-	T
SLTR8A	-	300	-	A200	-	T1.0

Example



The drawing of the app. example is a reference image.

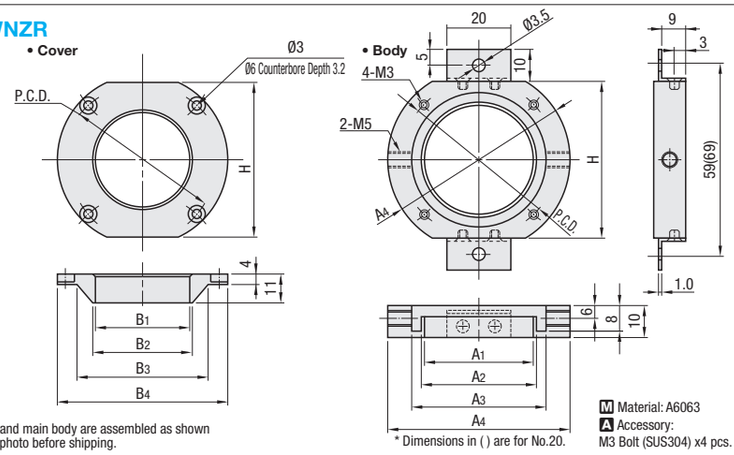
■Features: Simple nozzles with a slit in a pipe. Suitable when the distance to the object is short.

■Precaution for Use: Actual spray width and colliding force vary. And the slit width may increase depending on air pressure. When more even blows are required, use Air Nozzles (**P.1455**) and Steel Hollows for Air Nozzles (**P.1474**).

■Nozzles for Pipe Washing

RoHS

PWNZR



*Cover and main body are assembled as shown in the photo before shipping.

* Dimensions in ( ) are for No.20.

M Material: A6063
A Accessory:
M3 Bolt (SUS304) x4 pcs.

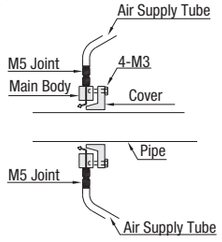
Part Number Type	No.	H	Cover Dimension B1	B2	B3	B4	Body Dimension A1	A2	A3	A4	P.C.D.	Applicable Max. Pipe O.D.	Unit Price 1 ~ 20 pc(s).
PWNZR	10	49	26	28	40	57	34	36	42	57	49	Ø20	
	20	59	36	38	50	67	44	46	52	67	59	Ø30	

For orders larger than indicated quantity, please request a quotation.

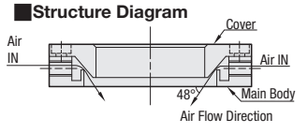
Ordering Example

Part Number
PWNZR10

Example



■Structure Diagram



■Step
①Insert the pipe into the nozzle to clean it.
②Apply the air pressure from both sides by an air compressor, and air will out-flow evenly from internal clearance (0.3mm).

■Specifications
Nozzle Air Pressure MPa (kg/cm²) when service air pressure is 0.69MPa (7kg/cm²).
・No.10 0.15(1.54)
・No.20 0.11(1.19)

・Use for blowing around cylindrical workpiece (pipe, etc.).

■Features: Can be used as air curtains when combined with Flat Type Air Nozzle on **P.1455**.

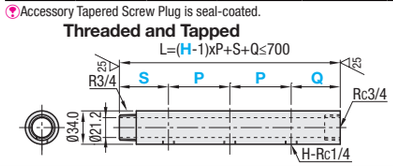
■Steel Hollows for Air Nozzles

RoHS

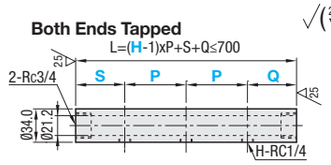
Type: Threaded and Tapped	Type: Both Ends Tapped	M Material	S Surface Treatment	Normal Pressure	A Accessory:
AMR	AMF	STPT370	Zinc Plating	0.7MPa	Tapered Screw Plug (SCM435, Black Oxide) 1 pc.
AMRS	AMFS	SUS304TP	-		Tapered Screw Plug (SUSXM7) 1 pc.

Accessory Tapered Screw Plug is seal-coated.

Threaded and Tapped



Both Ends Tapped



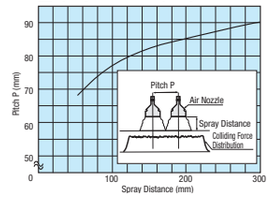
Part Number Type	No.	Number of Side Tapped Holes H	Pitch P 1mm Increment	S, Q 1mm Increment	AMR, AMF Unit Price H1, 2	H3, 4	H5, 6	H7, 8	H9, 10	AMRS, AMFS Unit Price H1, 2	H3, 4	H5, 6	H7, 8	H9, 10
(Threaded and Tapped) AMR AMRS (Both Ends Tapped) AMF AMFS	20A	1~10	60~80	35~80										

When H (the number of side tapped holes) is 1, specifying Pitch P is not necessary.

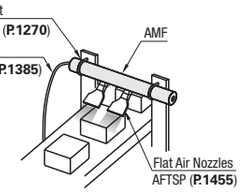
Ordering Example

Part Number	-	H (Number of Holes)	-	P	-	S	-	Q
AMR20A	-	1			-	S40	-	Q50
AMF20A	-	8	-	P70	-	S35	-	Q35

■Spray Width Property Table



Example

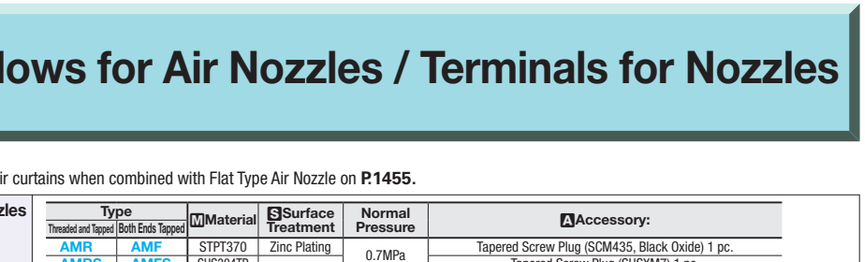


The graph is the property table when Flat Air Nozzle - Standard Type - on **P.1455** is installed.
Ex.)When the spray distance is 200mm, the Pitch P is 85 and the colliding force becomes almost even.
Values on the graph are for reference, not guaranteed.

■Terminals for Nozzles Clamp Type

RoHS

NZTA



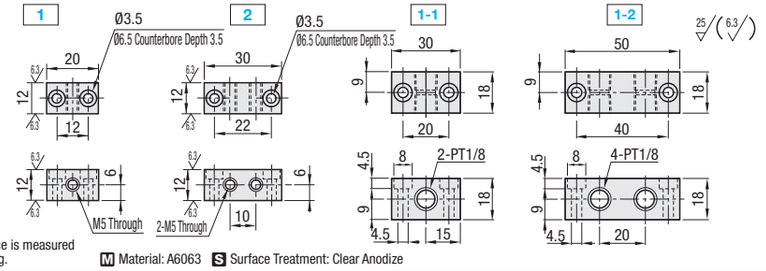
DH7 tolerance is measured before slitting.
M Material: A6063 S Surface Treatment: Clear Anodize

Part Number Type	D	No.	Rc(PT)	B	L	E	G	H	F	MA	d	d1	h	W	Included Bolt	Unit Price
NZTA	8	H	-	12	27	11	16	7	10	M3	3.5	6.5	3.5	1	SCB3- 8	
		V														
	10	H		16	30	13.5	16.5	8.5		M4	4.5	8	4.5	1.5	SCB4-10	
		V														
	12	H	1/8	18	40	15	25	10	16	M4	4.5	8	4.5	1.5	SCB4-10	
		V														
	15	H	1/4	22	52	19	33	13	22	M5	5.5	9.5	5.5	1.5	SCB5-15	
		V														

■Terminals for Nozzles Block Type

RoHS

NZTB



DH7 tolerance is measured before slitting.
M Material: A6063 S Surface Treatment: Clear Anodize

Part Number Type	No.	Unit Price
NZTB	1	
	2	
	1-1	
	1-2	

Part Number	-	No.
NZTA8 NZTB1-1	-	H

Example

Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

Nozzle Joints / Two-Fluid Nozzles

Spray Nozzles

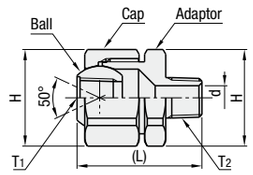
■Nozzle Joint

RoHS

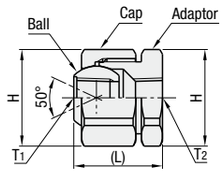
Type		Material	Max. Operating Pressure
Male, Female Ends	Female, Female Ends		
NJMS	NJFS	SUS303	1.0MPa
NJMP	-	PP Resin	

■Features
Swivel joints suitable for blows to anywhere.
By loosening a cap and then, tightening the joint by moving the ball, the joint can be fixed at an arbitrary position.
Angle adjustable range is 50°.

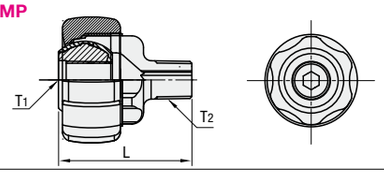
Male, Female Ends
NJMS



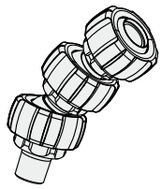
Female, Female Ends
NJFS



NJMP



Example
•For NJMP, products can be used in connected stacks.



Part Number		R/Rc (PT)		(L)	d	Wrench Flats H	Weight (g)	Unit Price	Volume Discount Rate
Type	No.	T1	T2					1 ~ 4 pc(s).	5~10
Male, Female Ends NJMS	1-1	1/8	1/8	32	5.5	22	80		
	1-2	1/8	1/4	36	8	22	90		
	2-2	1/4	1/4	41	8	29	170		
	2-3	1/4	3/8	43	11	29	190		
	3-3	3/8	3/8	49	11	35	290		

Part Number		Rc (PT)		(L)	Wrench Flats H	Weight (g)	Unit Price	Volume Discount Rate
Type	No.	T1	T2				1 ~ 4 pc(s).	5~10
Female, Female Ends NJFS	1-1	1/8	1/8	24	22	65		
	1-2	1/8	1/4	24	22	65		
	2-2	1/4	1/4	30	29	140		
	2-3	1/4	3/8	30	29	140		
	3-3	3/8	3/8	35	35	240		

Part Number		R/Rc (PT)		L	Unit Price	Volume Discount Rate		
Type	No.	T1	T2		1 ~ 4 pc(s).	5~9	10~19	20~30
Male, Female Ends NJMP	1-1	1/8	1/8	34.5				
	1-2	1/8	1/4					
	2-2	1/4	1/4					

For orders larger than indicated quantity, please check with WOS.

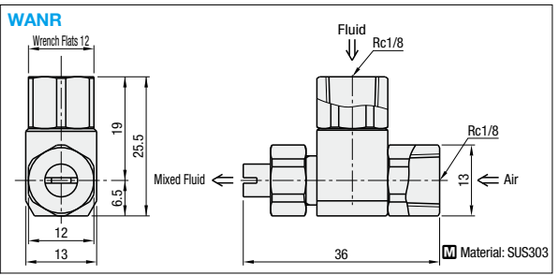
Ordering Example — Part Number: NJMS1-2

Ordering Example

■Two-Fluid Nozzle

WANR

RoHS



Part Number		Fluid Min. Passage Dia. (mm)	Weight (g)	Unit Price	Volume Discount Rate
Type	No.			1 ~ 4 pc(s).	5~10
WANR	0.5	0.5	35		

■Features
- Able to spray fine mists by mixing fluid and air at the same time. (Produces finer particles than the Spray Nozzles on **P.1476 ~ 1477**.)
- Compact, lightweight and useable in small space.
- Fluid or air flow rate becomes adjustable by adjusting pressure. Particle diameter gets finer as air percentage (air-water volume ratio) gets higher.

■Applications
Humidification, cooling, spray of chemical solution, etc.

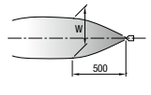
Ordering Example — Part Number: WANR0.5

Air Pressure (MPa)	Water Qty. (mℓ/min) / Air Qty. (ℓ/min (ANR)) at Water Pressure below (Mpa)								Spray Width (mm) at Water Pressure (MPa) below (Spray Distance 500mm)		
	0.2		0.3		0.4		0.5				
	Water Qty.	Air Qty.	Water Qty.	Air Qty.	Water Qty.	Air Qty.	Water Qty.	Air Qty.	0.2	0.3	0.4
0.1	182	28	228	27	258	26	284	25	800	900	900
0.2	146	47	200	45	248	43	280	41	800	800	900
0.3	102	65	168	63	222	61	259	59	700	800	900
0.4	58	83	127	82	189	80	232	78	600	800	900
0.5	-	-	92	97	158	96	207	95	-	800	900

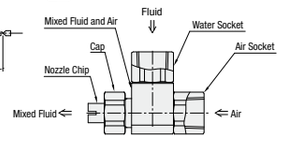
[-] indicates that the amount of water spray is too little or only air is sprayed. Spray Width (mm) is the length shown in the drawing below.

■Spray Photo

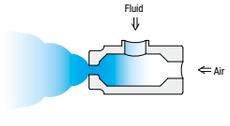
■Spray Width W (mm)



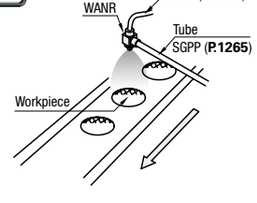
Component Details



■Principle of Operation
Fluid and air are mixed in the nozzle.



Example

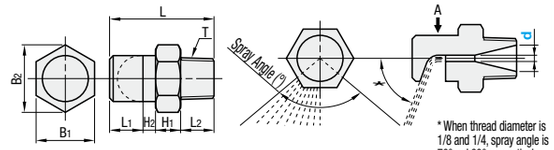


RoHS

Spray Shape: Fan-shaped

NZRFS

• Spray Angle



Arrow View A

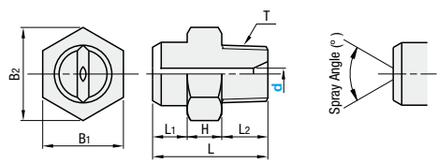
M Material: SUS304

RoHS

Spray Shape: Fan-shaped

NZRVFS (Wide Angle Type)
NZRVFU (Narrow Angle Type)

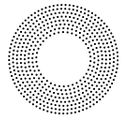
• Spray Angle



M Material: SUS304

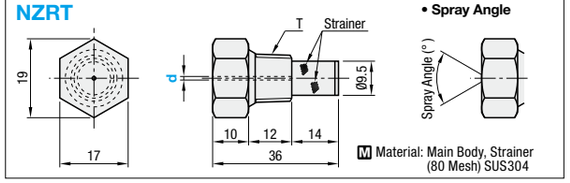
RoHS

Spray Shape: Annular Shape



NZRT

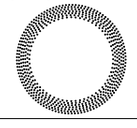
• Spray Angle



M Material: Main Body, Strainer (80 Mesh) SUS304

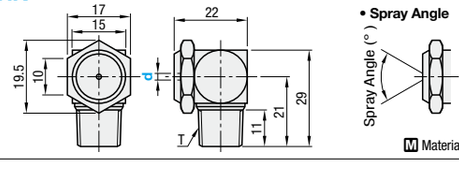
RoHS

Spray Shape: Annular Shape



NZRK

• Spray Angle



M Material: SUS304

Ordering Example — Part Number: NZRFS1 - d: 1.0

Part Number		d (Hole Dia.)	T	L	L1	L2	H1	H2	B1	B2	Weight (g)	Unit Price	Volume Discount Rate
Type	No.											1 ~ 4 pc(s).	5~20
NZRFS	1	1.0	R1/8	25.0	8.0	8.0	6.0	3.0	12.0	13.8	14.0		
		1.2											
		1.6											
		2.0											
		2.5											
	2	2.0	R1/4	32.0	14.0	10.0	6.0	2.0	14.0	16.0	27.0		
		2.5											
		3.2											
		4.0											

■NZRFS Specifications

Size	Hole Dia. (mm)	1.0			1.2			1.6			2.0			2.5		
1/8	Water Pressure (MPa)	0.05	0.1	0.2	0.05	0.1	0.2	0.05	0.1	0.2	0.05	0.1	0.2	0.05	0.1	0.2
	Water Qty. (ℓ/min)	0.36	0.60	0.86	0.64	0.89	1.26	1.17	1.66	2.31	1.84	2.59	3.58	2.87	4.07	5.60
	Spray Angle (°)	65	90	110	80	100	115	100	120	125	115	130	140	115	130	140
Size	Hole Dia. (mm)	2.0			2.5			3.2			4.0					
1/4	Water Pressure (MPa)	0.05	0.1	0.2	0.05	0.1	0.2	0.05	0.1	0.2	0.05	0.1	0.2			
	Water Qty. (ℓ/min)	1.77	2.50	3.49	2.81	3.95	5.40	4.60	6.30	8.85	7.25	10.1	14.2			
	Spray Angle (°)	110	120	130	115	125	135	115	130	135	115	130	140			

Listed values are for reference, not guaranteed. If the current fluid is air, the product does not spray with the values described on the above table.

Part Number		d (Hole Dia.)	T	L	L1	L2	H	B1	B2	Weight (g)	Unit Price	Volume Discount Rate
Type	No.										1 ~ 4 pc(s).	5~20
NZRVFS	1	2.0	R1/8	20	6	8	6	12	13.8	13		
		2.5										
		3.2										
		3.6										
NZRVFS NZRVFU	2	4.0	R1/4	20	6	10	6	14	16	20		
		5.0										
		6.4										
		7.0										

■NZRVFS Specifications

Size	Hole Dia. (mm)	2.0			2.5			3.2			3.6		
1/8	Water Pressure (MPa)	0.1	0.3	0.5	0.1	0.3	0.5	0.1	0.3	0.5	0.1	0.3	0.5
	Water Qty. (ℓ/min)	1.12	1.92	2.49	1.38	2.37	3.08	1.18	3.07	3.97	2.41	4.15	5.34
	Spray Angle (°)	50	65	70	55	55	60	45	60	65	45	60	65
Size	Hole Dia. (mm)	4.0			5.0			6.4			7.0		
1/4	Water Pressure (MPa)	0.1	0.3	0.5	0.1	0.3	0.5	0.1	0.3	0.5	0.1	0.3	0.5
	Water Qty. (ℓ/min)	3.37	5.79	7.43	4.89	8.44	10.88	7.57	13.07	16.9	8.82	15.3	19.78
	Spray Angle (°)	50	60	70	60	70	75	65	70	75	60	65	70

■NZRVFU Specifications

Size	Hole Dia. (mm)	4.0			5.0			6.4			7.0		
1/4	Water Pressure (MPa)	0.1	0.3	0.5	0.1	0.3	0.5	0.1	0.3	0.5	0.1	0.3	0.5
	Water Qty. (ℓ/min)	3.30	5.60	7.40	4.60	7.80	10.10	6.80	11.50	15.10	8.70	15.40	20.00
	Spray Angle (°)	30	40	45	30	40	45	30	40	45	30	40	40

Listed values are for reference, not guaranteed. If the current fluid is air, the product does not spray with the values described on the above table.

Part Number		d (Hole Dia.)	T	Weight (g)	Unit Price	Volume Discount Rate
Type	No.				1 ~ 4 pc(s).	5~20
NZRT	2	0.5	R1/4	33.0		
		0.7				
		1.0				

■Features: Since particle is very fine as a fluid nozzle, the higher the water pressure is, the higher the efficiency of air saturation becomes.

■Applications: Humidification, Small Amount of Fluid Application

■NZRT Specifications

Size	Hole Dia. (mm)	0.5				0.7				1.0			
1/4	Water Pressure (MPa)	0.2	0.3	0.4	0.5	0.2	0.3	0.4	0.5	0.2	0.3	0.4	0.5
	Water Qty. (ℓ/min)	0.11	0.13	0.15	0.17	0.14	0.17	0.19	0.21	0.20	0.24	0.27	0.30
	Spray Angle (°)	60	60	65	70	65	65	70	75	65	70	75	80

Listed values are for reference, not guaranteed.
Does not spray normally at less than 0.2MPa. If the current fluid is air, the product does not spray with the values described on the above table.

Part Number		d (Hole Dia.)	T	Weight (g)	Unit Price	Volume Discount Rate
Type	No.				1 ~ 4 pc(s).	5~20
NZRK	2	1.0	R1/4	44.0		
		1.6				
		2.0				
		2.4				
		3.2				

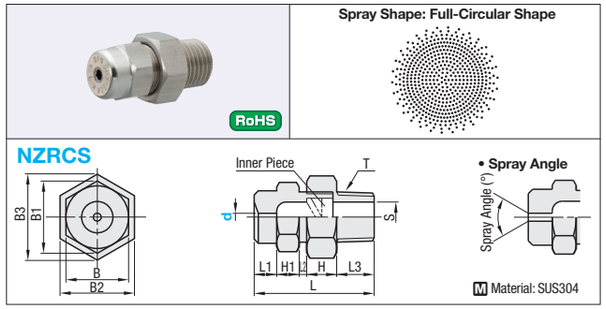
■Features: Inside is hollow. The higher the water pressure is, the finer the particle diameter becomes.

■Applications: Air Washer, Dust Removal, Defrosting, etc.

■NZRK Specifications

Size	Hole Dia. (mm)	1.0				1.6				2.0			
1/4	Water Pressure (MPa)	0.1	0.2	0.3	0.4	0.1	0.2	0.3	0.4	0.1	0.2	0.3	0.4
	Water Qty. (ℓ/min)	0.38	0.50	0.60	0.68	0.51	0.69	0.82	0.93	0.92	1.22	1.48	1.67
	Spray Angle (°)	70	75	80	80	70	80	80	80	70	80	80	80
Size	Hole Dia. (mm)	2.4				3.2							
1/4	Water Pressure (MPa)	0.1	0.2	0.3	0.4	0.1	0.2	0.3	0.4				
	Water Qty. (ℓ/min)	1.47	2.00	2.40	2.74	3.19	4.37	5.27	6.02				
	Spray Angle (°)	70	75	80	80	75	75	80	80				

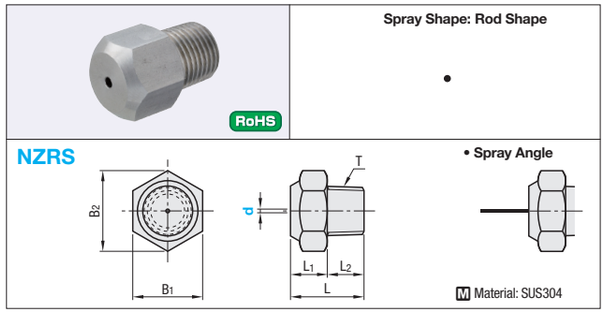
Listed values are for reference, not guaranteed. If the current fluid is air, the product does not spray with the values described on the above table.



Part Number Type	No.	d (Hole Dia.)	T	S	L	L_1	L_2	L_3	H	H_1	B	B_1	B_2	B_3	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~20
NZRCS	1	1.6	R1/8	Ø5	23.5	3	1	8.5	6	5	12	13.8	12	13.8	14.0		
		2.0															
	2	2.0	R1/4	Ø8	32	6	2	10	8	6	14	16	17	19.5	29.0		
		2.4															
		2.6															
		3.2															

NZRCS Specifications

Size	Hole Dia. (mm)	1.6					2.0				
1/8	Water Pressure (MPa)	0.05	0.10	0.20	0.30	0.50	0.05	0.10	0.20	0.30	0.50
	Water Qty. (ℓ/min)	1.08	1.51	2.09	2.55	3.26	1.29	1.79	2.48	3.05	3.91
	Spray Angle (°)	50	55	60	60	60	50	55	60	65	65
Size	Hole Dia. (mm)	2.0					2.4				
1/4	Water Pressure (MPa)	0.05	0.10	0.20	0.30	0.50	0.05	0.10	0.20	0.30	0.50
	Water Qty. (ℓ/min)	1.63	2.19	3.02	3.66	4.70	2.26	3.13	4.48	5.47	7.05
	Spray Angle (°)	40	45	50	50	50	45	55	60	60	60
Size	Hole Dia. (mm)	2.6					3.2				
1/4	Water Pressure (MPa)	0.05	0.10	0.20	0.30	0.50	0.05	0.10	0.20	0.30	0.50
	Water Qty. (ℓ/min)	2.72	3.72	5.24	6.41	8.35	3.76	5.11	7.22	8.73	11.23
	Spray Angle (°)	55	55	60	65	65	55	60	65	65	65



Part Number Type	No.	d (Hole Dia.)	T	L	L_1	L_2	B_1	B_2	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~20
NZRS	1	0.5	R1/8	18	10	8	12	13.8	12		
		0.7									
		1.0									
		1.2									
		1.6									
	2	1.6	R1/4	20	10	10	14	16	17		
		2.0									
		2.5									
		3.0									
		3.6									

■**Features:** The impact changes as water flow jets rod-like due to water pressure.
■**Applications:** Pinpoint Washing, Air Blow, etc.
■**Note:** Hole with small diameter may clog.

NZRS Specifications

Size	Hole Dia. (mm)	0.5				0.7				1.0				1.2				1.6			
1/8	Water Pressure (MPa)	0.2	0.3	0.5	0.7	0.2	0.3	0.5	0.7	0.2	0.3	0.5	0.7	0.2	0.3	0.5	0.7	0.2	0.3	0.5	0.7
	Water Qty. (ℓ/min)	0.14	0.18	0.22	0.26	0.31	0.37	0.47	0.55	0.91	1.12	1.46	1.70	1.29	1.56	1.79	2.09	2.26	2.41	3.06	3.59
Size	Hole Dia. (mm)	1.6				2.0				2.5				3.0				3.6			
1/4	Water Pressure (MPa)	0.2	0.3	0.5	0.7	0.2	0.3	0.5	0.7	0.2	0.3	0.5	0.7	0.2	0.3	0.5	0.7	0.2	0.3	0.5	0.7
	Water Qty. (ℓ/min)	2.31	2.82	3.30	3.88	3.57	4.34	4.92	5.78	5.62	6.83	7.93	9.30	8.19	9.98	12.85	14.19	11.88	14.50	16.84	19.94

■**Spray Angle Adjustable**

RoHS

Rod Shape: Angle 0° Full-circular Shape: Angle 30° Full-circular Shape: Angle 60°

■**Spray Photo**

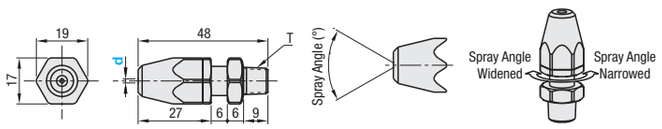
Part Number Type	No.	d (Hole Dia.)	T	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~20
NZRAJ	1	1.5	R1/8	50		
		2.0				

■**Features:** Nozzle with spray angle adjustable within range of 0 ~ 60°. This product allows for angle adjustment on site, and thus, facilitates action taken to response to workpiece change. It is possible to adjust the spray angle without using tools.

Ordering Example

Part Number	-	d
NZRCS1	-	1.6
NZRS2	-	1.6
NZRAJ1	-	1.5

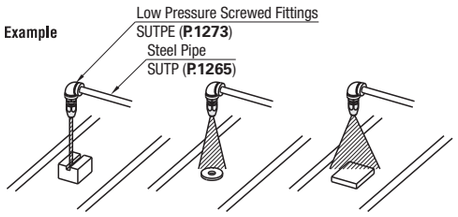
NZRAJ



Adjustable Angle 0 ~ 60° (See the spray photo.)
Material: SUS304

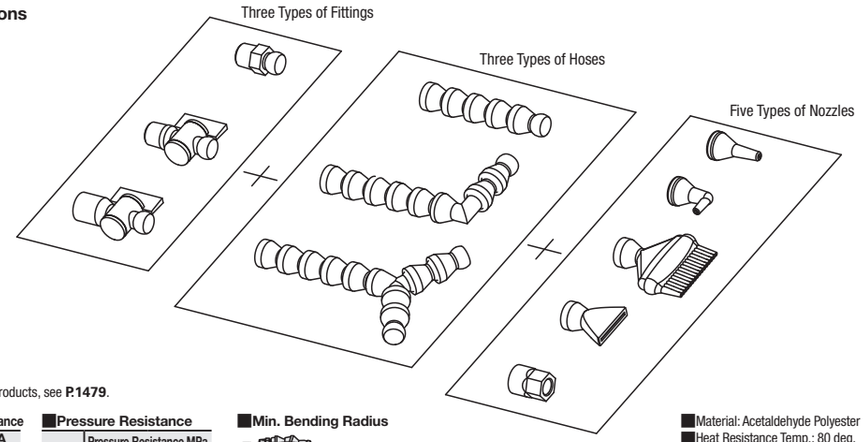
Hole Dia. (mm)	1.5														
Water Pressure (MPa)	0.05			0.1			0.2			0.3			0.5		
Angle (°)	0	30	60	0	30	60	0	30	60	0	30	60	0	30	60
Water Qty. (ℓ/min)	0.94	0.90	0.83	1.27	1.25	1.15	1.73	1.70	1.57	2.08	2.05	1.87	2.68	2.62	2.37
Hole Dia. (mm)	2.0														
Water Pressure (MPa)	0.05			0.1			0.2			0.3			0.5		
Angle (°)	0	30	60	0	30	60	0	30	60	0	30	60	0	30	60
Water Qty. (ℓ/min)	1.71	1.65	1.27	2.3	2.23	1.7	3.15	3.08	2.35	3.82	3.69	2.85	4.91	4.74	3.63

Example



■**Features:** Flexible hose can be bent at any angle and easily fits workpieces. Lightweight, nonconductive, chemical resistant, shock resistant, and heat resistant resin material (Polyacetal).
■**Applications:** Application of coolantoolant liquid or lubricant application for metal processing machines. For air blow when positioning is cumbersome.

■**Combinations**



For selection of products, see P.1479.

■**Material:** Acetaldehyde Polyester
■**Heat Resistance Temp.:** 80 deg.

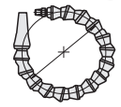
■**Chemical Resistance**

Chemical	A / NA
Solvent	○
Lubricant	○
Water	○
Acid	×
Alkali	×

■**Pressure Resistance**

No.	Pressure Resistance MPa	
	Fluid	Air
2	0.2	0.5
3		
4		

■**Min. Bending Radius**

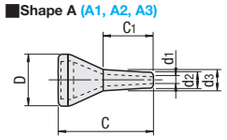


No.2 35mm
No.3 45mm
No.4 45mm

■**Dimension Details**

Nozzle

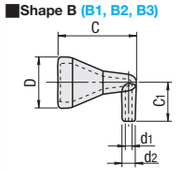
■**Shape A** (A1, A2, A3)



■**Shape A**

Hose Nominal	A1						A2						A3					
	C	C_1	D	d_1	d_2	d_3	C	C_1	D	d_1	d_2	d_3	C	C_1	D	d_1	d_2	d_3
2	30.0	16.0	16.0	1.6	4.9	7.0	30.0	19.0	16.0	3.2	6.3	9.6	35.0	25.5	16.0	6.3	9.6	11.0
3	33.0	19.0	21.0	6.3	9.5	13.0	39.0	28.0	21.0	9.5	13.0	15.0	33.0	22.0	21.0	12.7	15.0	16.0
4	37.5	24.5	24.5	6.6	10.5	12.5	37.5	24.5	24.5	9.5	12.5	15.5	37.5	24.5	24.5	12.5	17.0	19.0

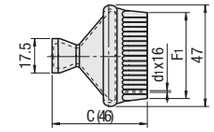
■**Shape B** (B1, B2, B3)



■**Shape B**

Hose Nominal	B1					B2					B3				
	C	C_1	D	d_1	d_2	C	C_1	D	d_1	d_2	C	C_1	D	d_1	d_2
2	24.5	12.0	16.0	1.8	4.1	25.5	12.0	16.0	3.2	5.6	26.3	12.0	16.0	6.3	9.0
4	36.0	20.0	24.5	6.8	9.5	37.0	18.0	24.5	9.5	12.4	39.0	19.5	24.5	12.4	15.4

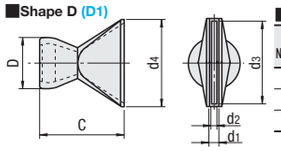
■**Shape C** (C1, C2)



■**Shape C**

Hose Nominal	C1		C2	
	d_1	F_1	d_1	F_1
2	1.0	41.0	1.5	41.0

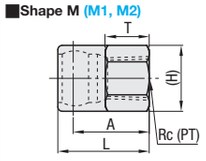
■**Shape D** (D1)



■**Shape D**

Hose Nominal	D1					
	C	D	d_1	d_2	d_3	d_4
2	26.4	16	3.2	1.7	25.4	26.8
3	39	21	5	3	32	34
4	50.5	25	6	4.5	44.5	48

■**Shape M** (M1, M2)

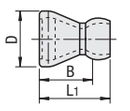


■**Shape M**

Hose Nominal	M1					M2				
	A	L	(H)	T	Rc (PT)	A	L	(H)	T	Rc (PT)
2	18.5	21	14	14	Rc1/8	22.5	25	17	10	Rc1/4

Shape of M2 is changed.

Hose Only

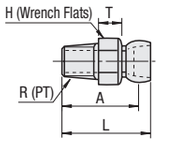


■**Hose** (For All Types)

Hose Nominal	Hose I.D.	D	B	L_1
2	6.3	16	14.5	20.7
3	9.5	21	17	25
4	12.7	24.5	20.3	30

Connector Only

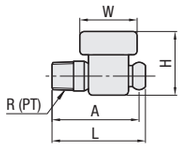
■**Male Threaded**



■**Shape AJ** (Male Threaded)

Hose Nominal	R (PT)	A	L	H	T
2	1(R1/8)	23	26.3	14	7
	2(R1/4)				
3	3(R3/8)	27.3	32	19	8
	4(R1/2)				
4	3(R3/8)	28	38.3	18.8	7.5
	4(R1/2)			20.8	

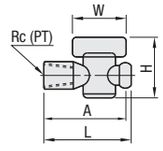
■**Male Valve**



■**Shape VA** (Male Valve)

Hose Nominal	R (PT)	A	L	H	W
2	R1/4	41	44	30	27
3	R3/8	45	49	34	25
4	R1/2	48.5	58	43	34

■**Female Valve**

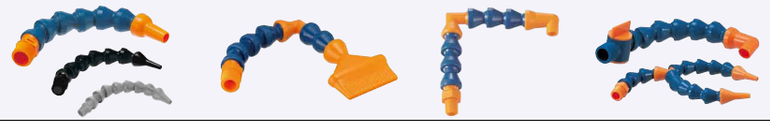


■**Shape VAF** (Female Valve)

Hose Nominal	Rc (PT)	A	L	H	W
2	Rc1/4	42	45	30	27
4	Rc1/2	58.2	64	63	34

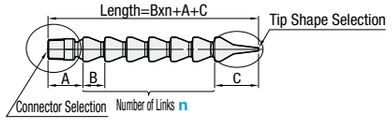
Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

Adjustable Hoses Set

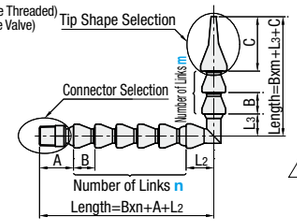


RoHS

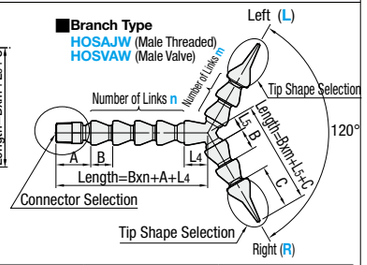
■**Standard Type**
HOSAJ (Male Threaded)
HOSVA (Male Valve)
HOSVAF (Female Valve)



■**L-Shaped**
HLAJ (Male Threaded)
HLVA (Male Valve)

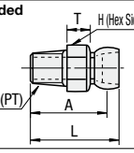


■**Branch Type**
HOSAJW (Male Threaded)
HOSVAW (Male Valve)

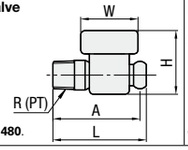


Connector Selection

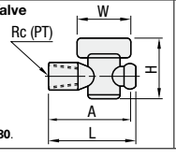
■**Male Threaded**
HOSAJ (Standard)
HLAJ (L-Shaped)
HOSAJW (Branch Type)
For dimension details, see P.1480.



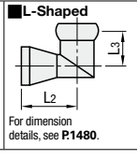
■**Male Valve**
HOSVA (Standard)
HLVA (L-Shaped)
HOSVAW (BranchType)
For dimension details, see P.1480.



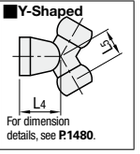
■**Female Valve**
HOSVAF (Standard)
For dimension details, see P.1480.



■**L-Shaped**
For dimension details, see P.1480.

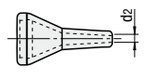


■**Y-Shaped**
For dimension details, see P.1480.



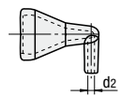
Tip Shape

■**Shape A (A1, A2, A3)**



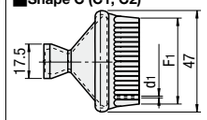
For dimension details, see P.1478.

■**Shape B (B1, B2, B3)**



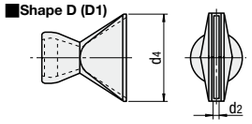
For dimension details, see P.1478.

■**Shape C (C1, C2)**



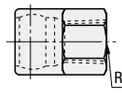
For dimension details, see P.1478.

■**Shape D (D1)**



For dimension details, see P.1478.

■**Shape M (M1, M2)**



For dimension details, see P.1478.

■Standard Type

Part Number: Type	Part Number: Hose Nominal	Hose Color Selectable	Number of Links n Configurable	Connector Thread Size (PT): For Male Threaded (Selection)	Connector Thread Size (PT): For Male Valve / Female Valve (Fixed)	Tip Shape (For dimension details, see P.1478.)
HOSAJ (Male Threaded) HOSVA (Male Valve) *HOSVAF (Female Valve)	2	Not Specified (Blue) G (Gray) B (Black)	0~30	1 (R1/8) 2 (R1/4)	2 (R/Rc1/4)	(Hose: Blue) A1, A2, A3, B1, B2, B3, C1, C2, D1, M1, M2 (Hose: Gray) A1, A2, A3, D1 (Hose: Black) A1, A2, A3, C1, C2, D1
	3	Not Specified (Blue) G (Gray)		3 (R3/8) 4 (R1/2)	3 (R/Rc3/8)	(Hose: Blue) A1, A2, A3, D1 (Hose: Gray) A1, A2, A3, D1
	4			3 (R3/8) 4 (R1/2)	4 (R/Rc1/2)	(Hose: Blue) A1, A2, A3, B1, B2, B3, D1 (Hose: Gray) A1, A2, A3, D1

* Hose nominal size 3 is not selectable for Female Valve. The hose color for Female Valve is blue only.

■L-Shaped Type Hose Body: Blue, Nozzle: Orange

Part Number: Type	Part Number: Hose Nominal	Number of Links n Configurable	Connector Thread Size (PT): For Male Threaded (Selection)	Connector Thread Size (PT): For Male Valve (Fixed)	Number of Links m Configurable	Tip Shape (For dimension details, see P.1478.)
HLAJ (Male Threaded) HLVA (Male Valve)	2	0~30	1 (R1/8) 2 (R1/4)	2 (R/Rc1/4)	0~20	A1, A2, A3, B1, B2, B3, C1, C2, D1, M1, M2
	4		3 (R3/8) 4 (R1/2)	4 (R/Rc1/2)		A1, A2, A3, B1, B2, B3, D1

■Branch Type Hose Body: Blue, Nozzle: Orange

Part Number: Type	Part Number: Hose Nominal	Number of Links n Configurable	Connector Thread Size (PT): For Male Threaded (Selection)	Connector Thread Size (PT): For Male Valve (Fixed)	Number of Links m Configurable: Right (R)	Number of Links m Configurable: Left (L)	Tip Shape (For dimension details, see P.1478.)
HOSAJW (Male Threaded) HOSVAW (Male Valve)	2	0~30	1 (R1/8) 2 (R1/4)	2 (R/Rc1/4)	0~20	0~20	A1, A2, A3, B1, B2, B3, C1, C2, D1, M1, M2
	4		3 (R3/8) 4 (R1/2)	4 (R/Rc1/2)			A1, A2, A3, B1, B2, B3, D1

Ordering Example

	Part Number	-	Hose Color	-	Number of Links n	-	Connectors Thread Size	-	Number of Links m	-	Number of Links m Right (R)	-	Number of Links m Left (L)	-	Nozzle
(Standard)	HOSVA2	-	B	-	20	-	2							-	D1
(L-Shaped)	HLVA2			-	10	-	2	-	5					-	B1
(Branch)	HOSVAW2			-	5	-	2			-	R10	-	L7	-	D1

Hose Nominal	Link Unit Price	Connector Unit Price: Shape AJ	Connector Unit Price: Shape VA	Connector Unit Price: Shape VAF	Nozzle Unit Price: A1 A2 A3	Nozzle Unit Price: B1 B2 B3	Nozzle Unit Price: C1 C2	Nozzle Unit Price: D1	Nozzle Unit Price: M1 M2	L-Shaped Type / Branch Type Additional Price
2										
3				-		-	-		-	-
4							-		-	

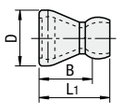
Price Calculation Example
・For Standard Type HOSAJ2-30-1-A1:
(Link Unit Price) x (Number of Links) + (Connector Unit Price) + (Nozzle Unit Price)
・For L-Shaped Type HLVA2-10-2-5-B1:
(Link Unit Price) x (Number of Links n + Number of Links m) + (Connector Unit Price) + (Nozzle Unit Price) + (L-Shaped Type Additional Price)
・For Branch Type HOSVAW2-5-2-R10-L7-D1:
(Link Unit Price) x (Number of Links + Number of Links on the Right + Number of Links on the Left) + (Connector Unit Price) + (Tip Shape Price for 2 pcs.) + (Branch Type Additional Price)

Adjustable Hoses Components / Installation Tools

■**Hose** (Blue)

RoHS

HJD

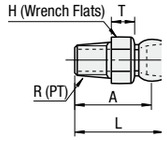


Part Number: Type	Part Number: Hose Nominal	Number of Links	Hose I.D.	D	B	L1	Unit Price: 1 ~ 20 pc(s).
HJD	2	5	6.3	16	14.5	20.7	
	3		8.5	21	17	25	
	4		12.7	24.5	20.3	30	

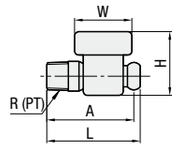
■**Connector Only** (Orange)

RoHS

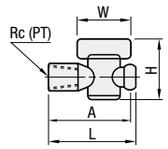
■**Male Threaded** AAJD



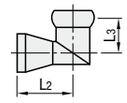
■**Male Valve** AVAD



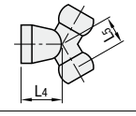
■**Female Valve** AVAFD



■**L-Shaped** AAJL



■**Y-Shaped** AAJY



Part Number: Type	Part Number: Hose Nominal	Connector Thread Size R (PT)	A	L	H	T	Unit Price: 1 ~ 20 pc(s).
AAJD	2	1 (R1/8)	23	26.3	14	7	
		2 (R1/4)					
	3	3 (R3/8)	27.3	32	19	8	
		4 (R1/2)					
	4	3 (R3/8)	28	38.3	18.8	7.5	
		4 (R1/2)			20.8		

Part Number: Type	Part Number: Hose Nominal	Connector Thread Size R (PT)	A	L	H	W	Unit Price: 1 ~ 20 pc(s).
AVAD	2	2 (R1/8)	41	41	30	27	
	3	3 (R3/8)	45	45	34	25	
	4	4 (R1/4)	48.5	48.5	43	34	

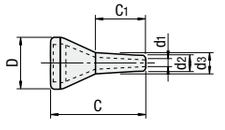
Part Number: Type	Part Number: Hose Nominal	Connector Thread Size R (PT)	A	L	H	W	Unit Price: 1 ~ 20 pc(s).
AVAFD	2	2 (Rc1/4)	42	45	30	27	
	4	4 (Rc1/2)	58.2	64	63	34	

Part Number: Type	Part Number: Hose Nominal	AAJL: L2	AAJL: L3	AAJY: L4	AAJY: L5	Unit Price 1 ~ 20 pc(s).: AAJY	Unit Price 1 ~ 20 pc(s).: AAJL
AAJL (L-Shaped) AAJY (Y-Shaped)	2	17	12	15.5	9.5		
	4	23.5	16.5	23.5	19		

■**Nozzle Only** (Orange)
(Photo is for Shape A)

RoHS

HAKD
(Drawing is for Shape A)



For dimension details, see P.1478.

Part Number: Type	Part Number: Hose Nominal	Nozzle: Shape	Nozzle: No.	Unit Price 1 ~ 20 pc(s).: Shape A	Shape B	Shape C	Shape D	Shape M
HAKD	2	A B C D M	1					
			2				-	
			3			-	-	-
	3		1		-	-		-
			2		-	-	-	-
			3		-	-	-	-
	4		1			-		-
			2			-	-	-
			3			-	-	-

Ordering Example

	Part Number	-	Number of Links		Part Number	-	Nozzle		Part Number	-	Connector Thread Size
	HJD2	-	5		HAKD2	-	A1		AAJD2	-	1

■Special Mounting Tool for Adjustable Hose

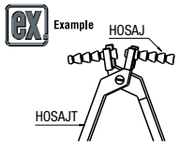
RoHS

Part Number: Type	Part Number: No.	Unit Price
HOSAJT	2	
	3	
	4	

Hose body is fragile; handling requires careful attention.
Can be used for both installation and removal.

Ordering Example: Part Number HOSAJT2

Example

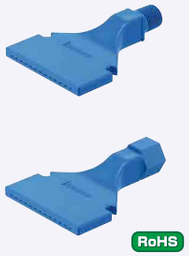


Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

Flat Air Nozzles

Standard (Plastic/Metal)

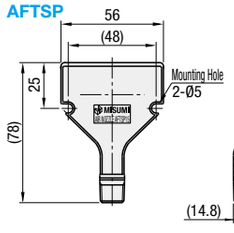
■Standard (Plastic)



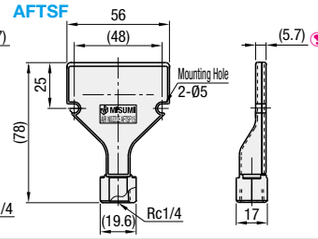
RoHS

Type	Material	Max. Operating Pressure	Heat Resistance Temp.	Screw Shape	Thread Breakdown Torque
AFTSP AFTSF	ABS Resin	0.7MPa	70°C	Male Thread Tapped	15N·m 10N·m

AFTSP



AFTSF



■**Applications:** For removal of oil, water drops and chips, cooling/drying and air curtain, etc.

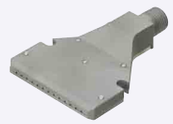
- To prevent damage
  - Avoid excessive tightening of screws.
  - Avoid shocks to the screws.
- Grooves are provided at the tip of the nozzle to protect the orifice.

Part Number Type	No.	Orifice	Air Flow Rate NL /Min (for 0.3MPa)	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~39	40~99	100~200
AFTSP	10	13-□0.7	240	16.8				
	15	13-□0.9	260	16.5				
	25	13-□1.2	280	16.2				
AFTSF	15	13-□0.9	240	16.5				

Ordering Example: Part Number AFTSP15

For orders larger than indicated quantity, please check with WOS.

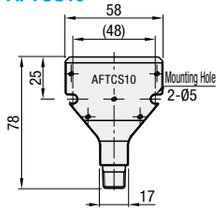
■Standard (Metal) - Cast



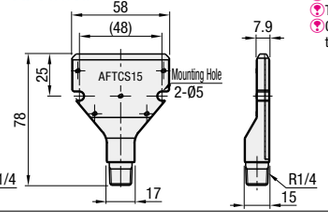
RoHS

Type	Material	Max. Operating Pressure	Heat Resistance Temp.
AFTCS	SUS304	0.4MPa	200°C

AFTCS10



AFTCS15



■**Applications:** For removal of oil, water drops and chips, cooling/drying and air curtain, etc.

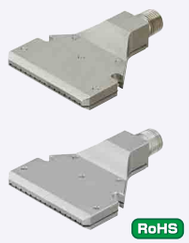
- Do not disassemble the main body.
- The part number is engraved.
- Grooves are provided at the tip of the nozzle to protect the orifice.

Part Number Type	No.	Orifice	Air Flow Rate NL / Min (for 0.3MPa)	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~9	10~19	20~30
AFTCS	10	13-□0.7	240	160				
	15	13-□0.9						

Ordering Example: Part Number AFTCS15

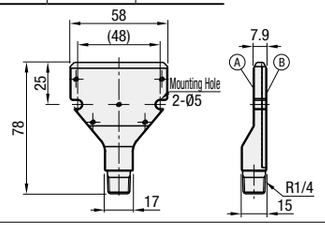
For orders larger than indicated quantity, please check with WOS.

■Standard (Metal)



RoHS

Type	Material	Max. Operating Pressure	Heat Resistance Temp.
AFTSA	A5052P	0.4MPa	200°C
AFTSS	SUS304		



■**Applications:** For removal of oil, water drops and chips, cooling/drying and air curtain, etc.

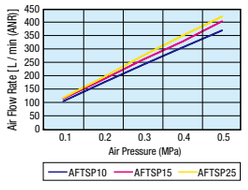
- Do not disassemble the main body.
- The MISUMI logo, Product Name or Part Number is not engraved.
- Grooves are provided at the tip of the nozzle to protect the orifice.
- A gasket is inserted between A and B.

Part Number Type	No.	Orifice	Air Flow Rate NL/Min (for 0.3MPa)	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~9	10~19	20~30
AFTSA	15	13-□0.9	240	60				
AFTSS				165				

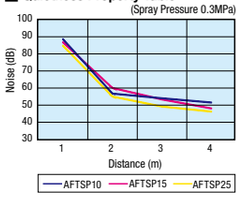
Ordering Example: Part Number AFTSA15

For orders larger than indicated quantity, please check with WOS.

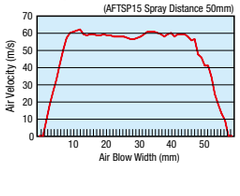
■ **Air Flow Rate Property Table**



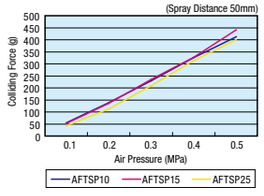
■ **Quietness Property Table** (Spray Pressure 0.3MPa)



■ **Velocity Characteristic Table** (AFTSP15 Spray Distance 50mm)



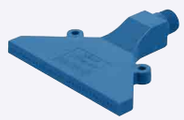
■ **Air Colliding Force Property Table** (Spray Distance 50mm)



Values on the graph are for reference, not guaranteed.

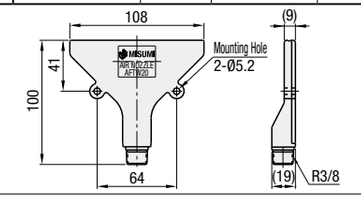
Air blow videos are now on the web! MISUMI Nozzles Videos Search http://jp.misumi-ec.com/

■Wide



RoHS

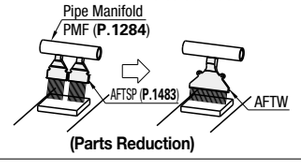
Type	Material	Max. Operating Pressure	Thread Breakdown Torque	Heat Resistance Temp.
AFTW	ABS Resin	0.7MPa	10N·m	70°C



■**Features**

Blow Port width approx. two times as wide as Standard Type (AFTSP).

- To prevent damage
  - Avoid excessive tightening of screw.
  - Avoid shocks to the screws.



Part Number Type	No.	Orifice	Air Flow Rate NL/Min (for 0.3MPa)	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~39	40~99	100~200
AFTW	20	32-Ø1	290	40				

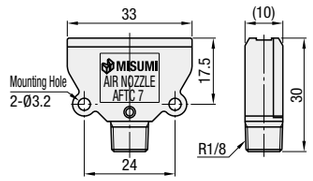
Ordering Example: Part Number AFTW20

For orders larger than indicated quantity, please check with WOS.

■Compact (Plastic)

RoHS

Type	Material	Surface Treatment	Max. Operating Pressure	Heat Resistance Temp.
AFTC	ABS Resin	-	0.7MPa	70°C



■**Features**

More compact than Standard Type (AFTSP). (Width: Approx. 40%, Overall Length: Approx. 60% more compact)

- To prevent damage
  - Avoid excessive tightening of screws.
  - Avoid shocks to the screws.

Part Number Type	No.	Orifice	Air Flow Rate NL / Min (for 0.3MPa)	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~39	40~99	100~200
AFTC	7	22-Ø0.7	210	5				

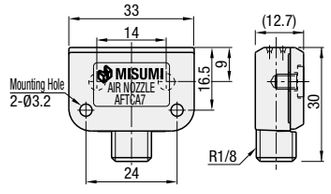
Ordering Example: Part Number AFTC7

For orders larger than indicated quantity, please check with WOS.

■Compact (Metal)

RoHS

Type	Material	Surface Treatment	Max. Operating Pressure	Heat Resistance Temp.
AFTCA	ADC12	Electroless Nickel Plating	0.7MPa	200°C



■**Features**

More compact than Standard Type (AFTSP). (Width: Approx. 40%, Overall Length: Approx. 60% more compact)

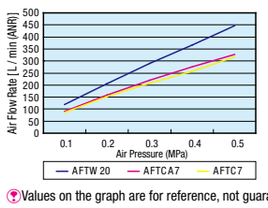
- To prevent damage
  - Avoid excessive tightening of screws.
  - Avoid shocks to the screws.

Part Number Type	No.	Orifice	Air Flow Rate NL / Min (for 0.3MPa)	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~9	10~19	20~30
AFTCA	7	5-Ø0.8, 6-Ø1.0	220	17				

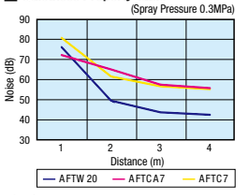
Ordering Example: Part Number AFTCA7

For orders larger than indicated quantity, please check with WOS.

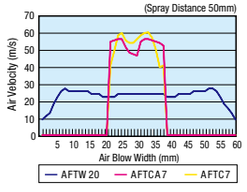
■ **Air Flow Rate Property Table**



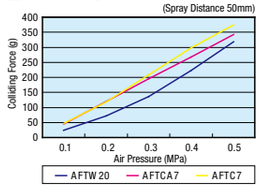
■ **Quietness Property Table** (Spray Pressure 0.3MPa)



■ **Velocity Characteristic Table** (Spray Distance 50mm)



■ **Air Colliding Force Property Table** (Spray Distance 50mm)



Values on the graph are for reference, not guaranteed.

Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

Rotary Nozzles

Long/Short

■Rotary Nozzles - Long

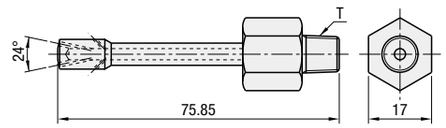
RoHS

Type	Material	Heat Resistance Temp.
SPNZL	Body: SUS304 Nozzle: A2017 Bearing: Retaining Ring	60°C

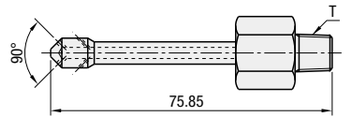
■Features

Are Rotary Nozzles - Long Type - intended to blow the air while rotating.
The internal bearing rotates by the moment force generated by compressed air.
More powerful air blow is possible by rotating.

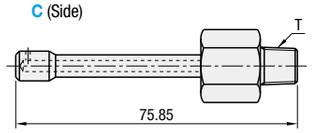
Tip Shape A (Narrow Angle)



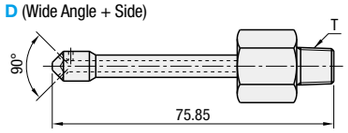
B (Wide Angle)



C (Side)



D (Wide Angle + Side)



Part Number		Orifice	T	Weight (g)	Unit Price	Volume Discount Rate		
Type	Tip Shape				1 ~ 4 pc(s).	5~9	10~19	20~30
SPNZL	A (Narrow Angle) B (Wide Angle)	3-Ø1.2, 2-Ø0.8	R1/8	31				
	C (Side)	3-Ø1.2						
	D (Wide Angle + Side)	6-Ø1.2						

For A and B Types, two Ø0.8 holes are provided to maintain rotation.

For orders larger than indicated quantity, please check with WOS.

Ordering Example: Part Number SPNZL - Tip Shape A

■Rotary Nozzles - Short

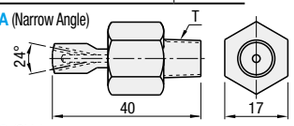
RoHS

Type	Material	Heat Resistance Temp.
SPNZ	Body: SUS304 Nozzle: A2017 Bearing: Retaining Ring	60°C

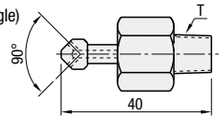
■Features

Are Rotary Nozzles - Short Type - intended to blow the air while rotating.
The internal bearing rotates by the moment force generated by compressed air.
More powerful air blow is possible by rotating.

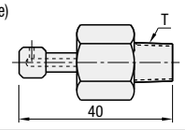
Tip Shape A (Narrow Angle)



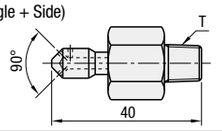
B (Wide Angle)



C (Side)



D (Wide Angle + Side)

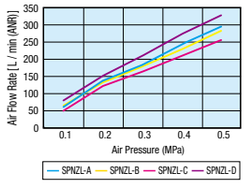


Part Number		Orifice	T	Weight (g)	Unit Price	Volume Discount Rate		
Type	Tip Shape				1 ~ 4 pc(s).	5~9	10~19	20~30
SPNZ	A (Narrow Angle) B (Wide Angle) C (Side)	3-Ø1.2	R1/8	28				
	D (Wide Angle + Side)	6-Ø1.2						

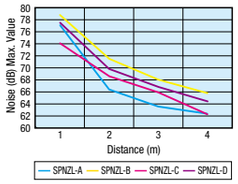
For orders larger than indicated quantity, please check with WOS.

Ordering Example: Part Number SPNZ - Tip Shape A

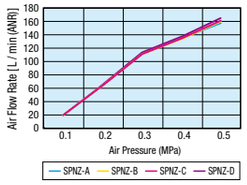
■SPNZL Air Flow Rate Property Table



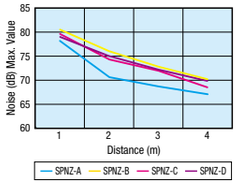
■SPNZL Quietness Property Table (Spray Pressure 0.3MPa)



■SPNZ Air Flow Rate Property Table

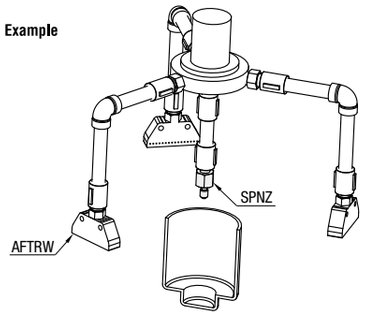


■SPNZ Quietness Property Table (Spray Pressure 0.3MPa)



Values on the graph are for reference, not guaranteed.

Example



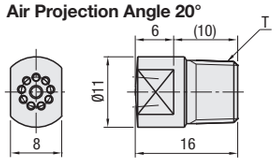
(Cleaning of Cylindrical Workpiece I.D./O.D.)

■Conical Spray Air Nozzles

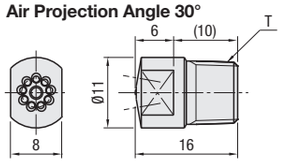
RoHS

Type	Material	Heat Resistance Temp.
ACNA	A5052	200°C
ACNS	SUS304	

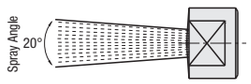
Air Projection Angle 20°



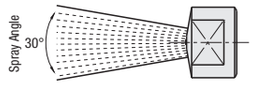
Air Projection Angle 30°



• Air Spray Image 20°



• Air Spray Image 30°



Part Number Type	No.	Air Projection Angle (°)	Orifice	T	Air Flow Rate NL/Min (for 0.3MPa)	Weight (g)	ACNA Unit Price 1 ~ 4 pc(s).	ACNA Volume Discount Rate 5~9	10~19	20~50	ACNS Unit Price 1 ~ 4 pc(s).	ACNS Volume Discount Rate 5~9	10~19	20~50
ACNA ACNS	1	20	9-Ø1.0 (Circumference Orifice)	R1/8	195	2								
		30	1-Ø0.8 (Center Part Orifice)											

For orders larger than indicated quantity, please check with WOS.

Ordering Example: Part Number ACNA1 - Air Projection Angle 20

■Radial Air Nozzles

AEDA

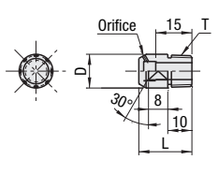
(30° Front)

(Side)

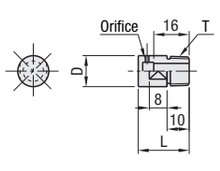
(15° Rear)

RoHS

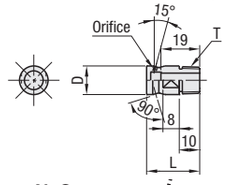
F (30° Front)



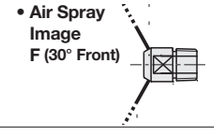
S (Side)



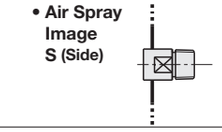
B (15° Rear)



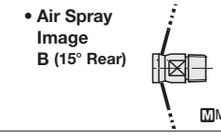
• Air Spray Image F (30° Front)



• Air Spray Image S (Side)



• Air Spray Image B (15° Rear)



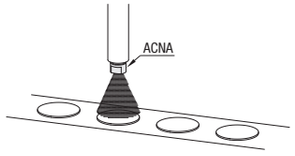
Material SUS303

Part Number Type	No.	Air Spray Direction	Orifice	D	T	L	Air Flow Rate NL/Min (for 0.3MPa)	Weight (g)	Unit Price 1 ~ 4 pc(s).	Volume Discount Rate 5~9	10~19	20~50
AEDA	2	F (30° Front)	8-Ø1.6	14	R1/4	22	240	15				
		S (Side)				23	330	15.5				
		B (15° Rear)				26	350	17.5				

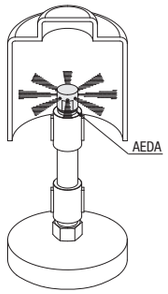
For orders larger than indicated quantity, please check with WOS.

Ordering Example: Part Number AEDA2 - Air Spray Direction F

Example

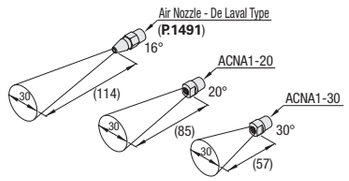


(Lens Surface Cleaning)



(Cleaning of Cylindrical Workpiece Inside)

■Relationship between Projection Angle and Spray Distance



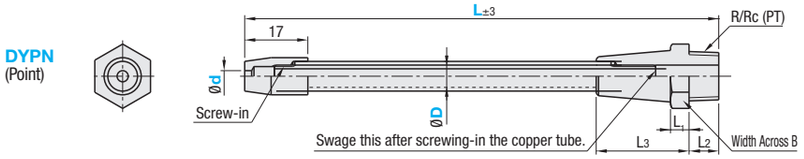
RoHS

Type: Point	Type: Slit	Type: Cross-Shaped	Material: Main Body	Material: Tube	Material: Tip Nozzle Coupling
DYPN	DYPNB	DYPNC	Copper Pipe	Nylon	Brass (Chrome Plating)

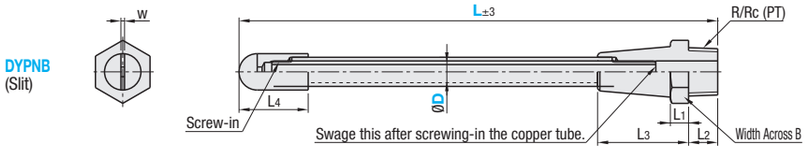
■Features

This product eliminates the need to purchase and assemble the couplings, copper pipes or tip nozzles.
Tip Nozzles are selectable.

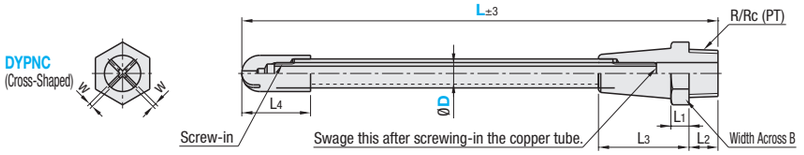
DYPN (Point)



DYPNB (Slit)



DYPNC (Cross-Shaped)



Part Number Type	Part Number D	d	L 10mm Increment	Tube Color	L1	L2	L3	B	R/Rc (PT)	Unit Price L150~250	Unit Price L260~350
(Point) DYPN	4	1 1.5 2	150~350	A (Blue) B (Black) R (Red)	5	8	19	12	1/8		
	6	1.5 2 3					25	14	1/4		

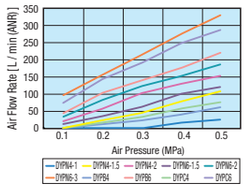
Part Number Type	Part Number D	L 10mm Increment	Tube Color	w	L1	L2	L3	L4	B	R/Rc (PT)	Unit Price L150~250	Unit Price L260~350
(Slit) DYPNB	4	150~350	A (Blue) B (Black) R (Red)	0.5	5	8	19	18	12	1/8		
	6			1			25	19		1/4		
(Cross-Shaped) DYPNC	4			0.5			19	18	14	1/8		
	6			1			25	19		1/4		

D dim. is the dimension of the copper pipe.

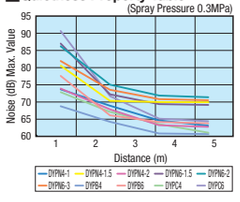
For orders larger than indicated quantity, please check with WOS.

Ordering Example: Part Number DYPN4 - d 1.5 - L 150 - Tube Color A
Part Number DYPNB4 - L 150 - Tube Color A

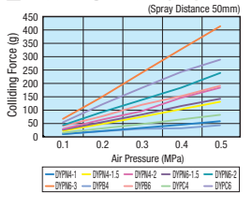
■Air Flow Rate Property Table



■Quietness Property Table



■Air Colliding Force Property Table



Values on the graph are for reference, not guaranteed.

Example